DOCUMENT RESUME

ED 041 108 08 VT 010 395

AUTHOR	Skelton, Gail J.; Hensel, J. W.
TITLE	The Change Process in Education: A Selected and Annotated Bibliography. Final Report.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational and Technical Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
REPORT NO	Bibl-Ser-5
BUREAU NO	BR-7-0158
PUB DATE	70
GRANT	OEG-3-7-000158-2037
NOTE	97p.
EDRS PRICE	EDRS Price MF-$0.50 HC-$4.95
DESCRIPTORS	Abstracts, *Annotated Bibliographies, *Changing Attitudes, *Communication (Thought Transfer), *Decision Making, *Educational Change, Educational Research

ABSTRACT

This document was developed as a working paper by a research staff concerned with the change process in vocational and technical education. Works selected for inclusion treat: (1) the change process in education rather than in other fields, (2) the relationship between various types of communication processes, patterns, structures and high or low change orientation and/or adoption behavior in an educational organization, (3) decision-making process in an educational organization, and (4) communication behavior patterns of opinion leaders and isolates. Abstracts are arranged under the following headings: (1) Empirical Works on the Change Process, (2) Theoretical or Non-Empirical Works on the Change Process, (3) Collections of Readings on the Change Process, (4) Bibliographies on the Change Process, and (5) Works from Dissertation Abstracts. Titles which are available through the Educational Resourses Information Center (ERIC) list an ERIC document number, the issue of Research in Education (RIE) containing the ERIC resume, and microfiche and hard copy prices following the bibliographic citation. The 135 cited documents are arranged alphabetically in a bibliographic index. (DM)

BIBLIOGRAPHY
SERIES NO. 5
VT 010 395

ED041108

a selected
and annotated
bibliography

The Change Process in Education

ERIC

Clearinghouse on Vocational
and Technical Education

VT 010 395

The Center for Vocational and Technical Education has been established as an independent unit on The Ohio State University campus with a grant from the Division of Comprehensive and Vocational Education Research, U.S. Office of Education. It serves a catalytic role in establishing consortia to focus on relevant problems in vocational and technical education. The Center is comprehensive in its commitment and responsibility, multidisciplinary in its approach, and interinstitutional in its program.

The major objectives of The Center follow:

1. To provide continuing reappraisal of the role and function of vocational and technical education in our democratic society;

2. To stimulate and strengthen state, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and technical education;

3. To encourage the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings;

4. To conduct research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education;

5. To upgrade vocational education leadership (state supervisors, teacher educators, research specialists, and others) through an advanced study and inservice education program;

6. TO PROVIDE A NATIONAL INFORMATION RETRIEVAL, STORAGE, AND DISSEMINATION SYSTEM FOR VOCATIONAL AND TECHNICAL EDUCATION LINKED WITH THE EDUCATIONAL RESOURCES INFORMATION CENTER LOCATED IN THE U.S. OFFICE OF EDUCATION.

ED041108

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

BIBLIOGRAPHY SERIES NO. 5
VT 010 395

A SELECTED AND ANNOTATED BIBLIOGRAPHY
THE CHANGE PROCESS IN EDUCATION

GAIL J. SKELTON

Technical Assistant

J. W. HENSEL

Center Specialist and Project Director

1970

This publication was prepared pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

ERIC Clearinghouse on Vocational and Technical Education
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210

PREFACE

The change process in education is one of the major research program thrusts of The Center for Vocational and Technical Education. This effort aims to devise viable alternatives for managing change as it occurs in man's social, technological, and occupational environment.

This publication resulted from a search of relevant literature on the change process in education. Research studies included in this bibliography were compiled by Mrs. Gail Skelton, Technical Assistant at The Center for Vocational and Technical Education. This publication was part of Project M-1, The Change Process in Vocational and Technical Education which was directed by Dr. James W. Hensel, Center Specialist.

The Center greatly appreciates the permission to quote studies cited in other bibliographies on the change process granted by Ronald G. Havelock, Director of The Center for Research on Utilization of Scientific Knowledge, University of Michigan, and Norman Kurland, Director of The Center on Innovation in Education, New York State Education Department.

Robert E. Taylor
Director,
The Center for Vocational
and Technical Education
ERIC Clearinghouse

INTRODUCTION

The primary purpose of this document is to provide a review of relevant research concerning the change process in education for use by researchers at The Center for Vocational and Technical Education. Other researchers may find the bibliographies useful but should bear in mind that it is intended as a working document only.

The vast number of research studies in the general field of change made it evident that the real problem was one of purposeful selection of documents rather than one of identification. The works included in this annotated bibliography concerning the change process in education have been chosen because they met at least one of three specific criteria. To be included, the studies must:

1. Deal with the change process in education rather than other fields (such as agriculture or sociology).
2. Be concerned with the specific areas of interest which The Center task force of the Change Process delineated as having top priority. These areas included:
    a. The relationship between various types of communication processes, patterns, structures, and high or low change orientation and/or adoption behavior in an educational organization.
    b. The decision-making process in an educational organization.
    c. The communication behavior patterns of opinion leaders and isolates.

Again, it should be emphasized that this collection of works is by no means intended to be exhaustive nor is it to be construed as an evaluation of work in the field. Many valuable works on the change process are not abstracted here as they did not seem to relate directly to the research under consideration.

1✓/v

Titles which are available through the Educational Resources Information Center (ERIC) have an ERIC document (ED) number following the bibliographic citation. The issue of *Research in Education* (RIE) which contains the ERIC resume is cited along with the microfiche (MF) and hard copy (HC) prices. Microfiche or hard copy is available from the ERIC Document Reproduction Service (EDRS). Orders must identify microfiche or hard copy, ED number, and must include payment for items totaling less than $5.00, a handling charge of $0.50, and sales tax for states with sales tax laws. Send order to EDRS, National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014.

EDRS prices cited in this bibliography reflect the prices in effect at the time of publication. Retrospective use of this bibliography requires attention to the most recent price schedules which are available in a current issue of RIE.

CONTENTS

PREFACE . . . . *iii*

INTRODUCTION . . . . *v*

ABSTRACTS OF RESEARCH RELATED TO THE CHANGE PROCESS IN EDUCATION

A. Empirical Works on the Change Process 3

B. Theoretical or Non-Empirical Works on the Change Process 31

C. Collections of Readings on the Change Process . 51

D. Bibliographies on the Change Process 63

E. Works from Dissertation Abstracts 67

ALPHABETICAL INDEX OF SELECTED ABSTRACTS RELATED TO THE CHANGE PROCESS IN EDUCATION

Bibliography: Selected Works Relevant To The Change Process in Education. 83

ABSTRACTS OF RESEARCH RELATED TO THE CHANGE PROCESS IN EDUCATION

EMPIRICAL WORKS ON THE CHANGE PROCESS

Argyris, Chris. *Organization and Innovation.* Homewood, Illinois: Richard I. Irwin, Inc., 1965.

The purpose of this book is to present preliminary findings of studies made of how varying degrees of interpersonal competence among top managers influences their, and the organization's, innovativeness, willingness to take risks, and problem-solving effectiveness--as perceived by the participants.

A second purpose is to present a new system of categories that can be used to observe variables related to interpersonal competence and with which useful predictions can be made and tested.

The focus is on three "outputs" of interpersonal competence. The higher the interpersonal competence of the individual, the greater is:

1. The awareness of relevant problems.
2. The ability to solve problems in such a way that they remain solved.
3. The probability that the problem-solving process involved has not been harmed or negatively influenced.

Beginning with these outputs of interpersonal competence, it is possible to reason backwards, trying to make explicit what sorts of necessary behavior would be required to lead the resultants listed to be as high as possible.

These behaviors are divided into a set of categories on two levels: Individual and Norm. From these categories, three hypotheses are generated. To test these hypotheses, questionnaires, interviews, and behavior observations were used in three organizations each having different characteristics.

On the basis of his findings, the author develops a model of how interpersonal competence and innovation are related. His thesis is that the degree of interpersonal

2/3

competence in his studies was low enough to be a major cause of the deterioration of innovation in organization.

Averill, Thomas B. "Educational Participation and Innovativeness." *Journal of Educational Research.* 60; July-August 1967. Abstract: From *Research in Education.* 3:15; June 1968 (ED 015 394).

"Farmers were classified into four groups according to their tendency to adopt farm practice innovations. Participation in educative activities was postulated to be relevant to their openness to new ideas and practices. A structured interview schedule was used to determine the farmer's participation in educational activities--reading books and magazines, attending adult classes, conferences, institutes, taking correspondence courses, and viewing selected television programs. Chi-square analysis revealed that this participation was not independent of the tendency to adopt new practices. One-way analysis of variance showed some relationship between openness and age, formal schooling, and sociometric status. Multiple covariance was done on participation scores, removing the effect of these variables. It was concluded that association between educative behavior and openness cannot be explained by characteristics commonly associated with educational participation. It is suggested that educative behavior is important in developing and maintaining an openness to new ideas."

Becker, Selwyn W. and Stafford, Frank. "Some Determinants of Organizational Success." *Journal of Business.* 40:511-518; October 1967.

The purpose of the study was to find out how much of the variance in organizational efficiency can be explained by organization size, adoption of innovations, psychological distance in the management team, administrative size, and the state of the organization's surrounding environment.

The sample was drawn from the 140 savings and loan associations having assets of $5 million or more in Cook County, Illinois. Sets of questionnaires were mailed to management personnel.

Organizational efficiency is the dependent variable. Adoption of innovations was measured by constructing an innovation index from the association managers' responses to the questionnaires. Results indicate that the five variables together explain about 40 percent of the variance in efficiency. Little explanatory power comes from the variables administrative size, adoption of innovations, and leadership style.

Cancian, Frank. "Stratification and Risk-Taking: A Theory Tested on Agricultural Innovation." *American Sociological Review.* 32:912-927; December 1967.

"It is usually asserted that rich farmers adopt new farming practices more readily than do poor ones. The question of the linearity or the nonlinearity of the relationship is usually left open, but in the absence of detailed data to the contrary, the most common assumption is that the relationship is approximately linear--the wealthier the farmer, the more likely he is to adopt an innovation." In this paper, it is shown that: "(1) the relationship between wealth and innovation is more complex than is usually assumed; (2) insofar as adoption depends on willingness to take economic risks, the relation between the variables is negative rather than positive; (3) empirical studies will show the relation to be curvilinear rather than linear."

The author presents a theory that predicts an inverse relationship between wealth and early adoption, and then presents data from seven studies of agricultural innovation to test his theory.

Results indicate that in the early stages of introduction of a new practice, inclination to risk, which appears to be inversely related to wealth, may be as important in the adoption process as knowledge and wealth itself.

Carlson, Richard O. *Adoption of Educational Innovations.* Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965.

This study concerns a number of elements of the diffusion process of modern math among 107 school superintendents in two locations: Allegheny County, Pennsylvania, and the State of West Virginia. Data were collected by personal interviews.

Findings:

1. Adoption of modern math tended to follow friendship patterns. Rate of adoption is related to the way in which a superintendent fits into the general order of friendship choices and friendship groups.

2. Early adopters of modern math tended to score higher than late adopters on measures of social network involvement and position in the status structure.

3. In Allegheny County, opinion leaders were found almost exclusively from the highest status level and as mainly drawing their advisees from the upper two status levels. The lower men were in the status structure of superintendents, the more they sought advice from non-leaders and the less they sought advice from opinion leaders. This was not true in West Virginia, where opinion leaders were drawn rather equally from all levels of the status structure, and their advisees were more often low status.

4. The characteristics of innovators were identified and outlined, and are distinguishable from non-innovators although these characteristics have not been identified with a great deal of assurance.

5. Varying rates of diffusion of a number of educational innovations (including modern math) are only partially accounted for by the five characteristics of innovations.

Included is a case study of the unanticipated consequences of adopting programmed instruction.

Carroll, Jean. "A Note on Departmental Autonomy and Innovation in Medical Schools." *Journal of Business*. 40:531-534; October 1967.

The author studied "innovating" vs. "non-innovating" medical schools in terms of major changes adopted. Eighty-five schools were included.

Four variables considered--the number of full-time salaried faculty members, number of full-time salaried clinical faculty members, number of department chairmen, and number of clinical department chairmen--were found to differentiate innovating from non-innovating schools.

Medical schools that have instituted innovation in their programs clearly differ from conservative schools in that they have larger faculties and a larger number of departments in both the basic sciences and clinical areas.

Cawelti, Gordon. "Innovative Practices in High Schools: Who Does What- Why- How." *Nation's Schools*. 79:56-88; April 1967.

This paper is a national survey of 7,237 accredited high schools disclosing, state by state, how many schools have accepted or rejected 27 important innovations.

Chesler, Mark; Schmuck, Richard; and Lippitt, Ronald. "The Principal's Role in Facilitating Innovation." *Theory into Practice*. 2: December 1963.

The purpose of this paper is to review the results of pilot investigation designed to determine what influence principal's behavior has on the development and sharing of innovative classroom practices.

Why is it that some teachers create and try out new classroom practices while others do not? There are three possible reasons for innovating: first, the teachers' feelings that a given practice is able to help solve problems important to them and their pupils. The second includes teachers' feelings that a given practice is easily adaptable to their own styles of teaching and does not demand a great investment of time or energy. The third includes teachers' feelings that the school administration will support new teaching practices.

At least two major factors are operating in the case of a principal who encourages staff inventiveness. First, the principal must have an accurate perception of the values and skills of his staff. Second, the staff must be aware of the priority that the principal places on the improvement of classroom teaching.

Principals with innovative staffs are more "professionally" oriented than those with less innovative staffs. The former are concerned with improving classroom practices, encouraging teacher growth, and continually evaluating pupil learning. The latter group, on the other hand, tend to be more "administratively" oriented. They are concerned primarily with achieving a smoothly running organization.

Christiansen, James E. and Taylor, Robert E. "The Adoption of Educational Innovations among Teachers of Vocational Agriculture: A Digest of a Ph.D. Dissertation." *Research in Education*. 3:134; July 1968. (ED 016 783)

Abstract: From Research in Education. 3:134; July 1968.

"To determine the relative influence exerted by different sources on the adoption of innovations among experienced vocational agriculture teachers, the study had as specific objectives to: (1) develop means of classifying teachers into adopter categories; (2) identify the more influential sources of information in creating awareness; (3) identify selected sources influential in causing adoption or rejection; (4) determine teacher perception of reasons for adoption or rejection; (5) analyze the role of sources of information in adoption or rejection; (6) identify the more effective channels of communication; and (7) determine whether district supervision could identify innovativeness among teachers.

Data were obtained from 101 experienced vocational agriculture teachers in 14 supervisory districts in Ohio. A pre-tested instrument was used in group interviews at regular district meetings. Supervisors were tested on their ability to identify adoption categories with a two-way, forced-choice comparison-of-pairs instrument. Some of the findings were:

1. State supervisors were most frequent sources of information.

2. The most common reasons for adoption were state supervisor's recommendations and observation of the innovation in use.

3. Lack of conviction as to the value of a practice and need of additional training to utilize it were the most frequent reasons for not adopting an innovation, especially among the slow adopters.

4. District supervisors, generally, could determine the degree of innovativeness exhibited by teachers within their districts."

Coleman, James S.; Katz, Elihu; and Menzel, H. *Medical Innovation: A Diffusion Study*. New York: Bobbs-Merrill, 1966.

The subject of this study was the successive adoption of a new drug by practicing physicians in four communities. The drug is one that could be used in everyday practice.

A pilot study was first carried out in a small New England community with some 30 doctors. After this was analyzed, a full-scale study was designed and carried out among 216 doctors in four Midwestern communities. Data collected was of three types: sociometric, prescription data, and interview data on the doctors.

Two kinds of information were derived from the study:

a. Individual differences among doctors in the time of adoption of the innovation.

b. Doctor-to-doctor relations and their importance for adoption of an innovation.

Results:

1. The innovative doctor is likely to be a heavy user of drugs of certain kinds; an internist; a frequent visitor to out-of-town medical centers and meetings; a reader of many professional journals; a man with a broad scope of attention to the medical world at large, and yet one who participates closely in his own medical community.

2. The more links and contacts a physician had--in other words, the more deeply integrated he was in his local medical community--the more likely he was to be an early user of gammanym (the drug in question). Institutional ties, informal professional contacts, and even friendship links played significant roles.

From these findings, the authors set up a model of how the diffusion process proceeds: "First, interpersonal influence on gammanym adoptions operated through professional relations among doctors who were in contact with many colleagues through professional ties. Next it showed its strength through the more socially defined relations of doctors who were tied to many doctors through friendship patterns. During a third stage, social influence made itself felt in the more open parts of the social structure--that is, among the relatively isolated doctors. The fourth stage saw some additional adoptions of gammanym by individuals who acted independently of the time at which their associates had introduced it; social influence had ceased to be effective. Finally, there followed a period during which no further adoptions occurred."

Crain, Robert L. "Fluoridation: The Diffusion of an Innovation among Cities." *Social Forces*. 44:467-475; 1966.

The theory of interpersonal influence in the diffusion of innovations (as in the drug diffusion study above) can be extended to deal with inter-city influence if the adopting unit in question is a municipal government rather than an individual. Using data on the adoption of fluoridation in the United States, this hypothesis was tested and confirmed. The most influential cities were those that were large or had large white collar populations. If a city takes a particular stand on fluoridation, its neighbors are likely to take the same action. The author found influence of stages in the adoption process.

Crain, Robert L.; Katz, Elihu; and Rosenthal, Donald B. *The Politics of Community Conflict: The Fluoridation Decision.* New York: Bobbs-Merrill, 1969.

This book is a study of community decision-making with respect to a single issue: the adoption or rejection of fluoridation.

The authors begin by reviewing the history of the fluoridation issue, and then discuss previous research on opposition to fluoridation, contrasting this with their model of decision-making used in this study.

The sample used consisted of 1,098 cities with populations between 10,000 and 500,000 and 83 smaller cities that had held referenda on fluoridation. Questionnaires were sent to the health officer, the publisher of the largest local newspaper, and the city clerk from each city. In addition, statistics on the adoption of fluoridation were collected, population characteristics of the cities involved were obtained from the Census Bureau, and data from Municipal Yearbooks on the form of government and formal political structures of the cities were employed.

In the authors' view, the failure of fluoridation to spread rapidly throughout the country is the result of special characteristics of the decision-making process in local government. Local governments in the United States are highly inefficient decision-making structures, whose natural inertia is sufficient to prevent adoption of new practices even when they have popular support.

In the absence of strong executive leadership and an institutionalized channel for the expression of opposition, broad popular participation spells the defeat of fluoridation.

Thus, the authors conclude that the defeat of fluoridation can be understood by considering: (a) the degree to which authority is centralized, (b) the extent to which a city recruits chief executives oriented to change, (c) the extent to which political reality requires elected officials to take into account popular opinion, and (d) the extent to which the public participates in the political process.

Eicholz, Gerald C. "Why Do Teachers Reject Change?" *Theory into Practice*. 2: December 1963.

Rejection exists as an integral and necessary part of the acceptance process. The theory of rejection has five stages: awareness, disinterest, denial, trial, and rejection. As part of the study to test this theory, 45 elementary school teachers in five schools were interviewed in depth concerning their attitudes towards audiovisual media, including materials ranging from films to globes. On the basis of a previously administered questionnaire each teacher was known to be a rejector.

It was found that factors such as the number of years of teaching experience or the grade taught made no appreciable difference in whether a teacher rejected a specific innovation.

Evan, William M. and Black, Guy. "Innovation in Business Organizations: Some Factors Associated with Success or Failure of Staff Proposals." *Journal of Business*. 40:519-530; October 1967.

The purpose of this paper is to analyze some factors affecting the success of proposals for innovation submitted predominantly by staff specialists to line management.

The dimensions of the innovation process to be investigated are:

a. Attributes of proposal for innovation, i.e. the characteristics of the new idea.

b. Attributes of the structure of the organization that facilitate or inhibit the implementation of new ideas.

c. Attributes of the staff-line relationship that affect the innovation process.

A questionnaire was constructed that was distributed to a sample of respondents in a number of organizations.

Results: 104 proposals for innovation are analyzed here: 53 were successful; 51 unsuccessful.

Proposals are more likely to be successful in organizations with a higher degree of professionalization of staff personnel, with a high degree of communication between staff and line personnel, with a higher degree of quality of proposals, with a higher degree of perceived need for the proposals, and with a higher degree of formalization of management.

The analysis is then broken down into technical and administrative proposals and their relationship to organizational characteristics. Some of the variables that discriminate between successful and unsuccessful proposals also discriminate between technical and administrative proposals.

The questionnaire used is included.

Evans, Richard I. in collaboration with Leppmen, Peter K. *Resistance to Innovation in Higher Education: A Social Psychological Exploration Focused on Television and the Establishment*. San Francisco: Josey Bros., Inc., 1967.

This study constitutes an examination of the response of one academic community to a particular innovation, instructional television. The investigators assessed the degree of sympathy and antipathy that faculty members expressed towards this innovation, and obtained data on general beliefs and personality organization. Combining these general data with specific attitudes toward ITV, some hypothetical prototypes of pro- and anti-ITV professors are constructed.

A questionnaire was sent to all faculty members at Metro University--a young institution in a rapidly growing urban community. The questionnaire had three sections: a section on professional, academic and biographical information; a semantic differential including attitudes toward ITV; and a number of preferred teaching methods, including ITV.

After exploring the attitudes of the faculty in general towards ITV, the authors set up a characterization of the pro- and anti-ITV professor. The pro-ITV professor was less conservative, less traditionally oriented, less "scholarly" and "academic" in the sense that he felt the university should include extracurricular and non-curricular activities. He was more willing to experiment with instructional techniques. The anti-ITV professor was academically and traditionally oriented and had many of the characteristics of Rogers' "laggard."

A second part of the study consisted of exploring possibilities of attitude change. Informally extending their study to nine other campuses, the authors found their results generally confirmed.

Fliegel, Frederick C. and Kivlin, Joseph A. "Attributes of Innovations as Factors in Diffusion." *American Journal of Sociology*. 72:235-248; 1966.

To explain the diffusion process the characteristics of the innovation must be taken into account as well as other factors.

A sample of farmers was taken and data obtained on rate of adoption of 33 modern farm practices and farmers' perceptions of 15 attributes of these practices. Results: By partial correlation analysis it was determined that innovations perceived as most rewarding and least risky are accepted most rapidly. High costs do not discourage adoption; direct contribution of the innovation to a major occupational interest enhances adoption, while complexity and the pervasiveness of consequences following from acceptance have no effect.

Further studies are needed in this area, using different types of respondents and different innovations. Ultimately, a scheme can be found for classifying innovations to be adopted.

Griffiths, Daniel E. "The Elementary School Principal and Change in the School System." *Theory into Practice*. 2:278-284; 1963.

To study the principal's innovativeness, a simulated administrative situation was devised and presented to 232 principals from all over the country. They were scored in two ways: the content and the style of their performance in the administrative simulation.

An Organizational Change score was calculated, reflecting the extent to which the subject introduced or considered introducing changes. This score was related to a number of personal characteristics of principals and the scores are discussed in detail.

Results seem to indicate that the elementary school principal seldom introduces a new idea into the school system and rarely reflects leadership. Author suggests that this can be explained by his position in the organizational hierarchy--he is at least three steps from the top even in a small district and works at some distance from the policy-makers.

Haber, Ralph Norman. "The Spread of an Innovation: High School Language Laboratories." *Journal of Experimental Education.* 31:359-369; Summer 1963.

An open-ended questionnaire was sent to all high schools known to have a language laboratory in January 1959, addressed to the chairman of the language department.

Sixteen questions were considered:

1. When was the laboratory installed?
2. How long did it take to install the lab once the idea was first raised?
3. Who brought up the idea first?
4. Where did the initiator hear about the laboratory?
5. Who were its prime movers?
6. Who made the final decision regarding adoption of the lab?
7. Who did the school check with for further information?
8. What kinds of information were obtained in the checking?
9. From what sources did the idea receive support?
10. If there was any opposition, where did it come from?
11. What were the greatest problems in establishing the lab?
12. Were there any arguments raised against the idea of the lab itself?

13. Did the school set up a pilot study before the lab was fully established?

14. What convinced the school of the need for the lab?

15. Has the school communicated with others regarding the lab?

16. What is the current opinion of the lab now?

Johnson, Cecil. "The Identification of Teacher Opinion Leaders: An Element in a Change Strategy for Agricultural Education." Ph.D. dissertation, The Ohio State University, 1968.

Abstract: From dissertation.

"The central purpose of this study was to gain some insight and understanding of the opinion leadership phenomenon as an element of a change strategy for agricultural education. The specific objectives of the study included developing a means of identifying opinion leaders and investigating the personal and social characteristics of those teachers identified as opinion leaders. Sixteen null and alternative hypotheses were derived from the theoretical base established for the study.

The study was based on data received from 272 teachers of vocational agriculture in South Carolina, representing 97.49 percent of all vocational agriculture teachers who were teaching at the time the study was conducted. Group interviews were used to gather data from teachers.

Teachers were placed into opinion leader and peer categories on the basis of the sociometric technique of identifying opinion leaders. Those individuals nominated four or more times by their peers as sources of advice and information were considered to be opinion leaders. Opinion leaders were identified in 11 areas of the vocational agriculture program. The self-designating and key informant techniques of identifying opinion leaders were also utilized in the study to determine whether either would be a reliable alternative to the sociometric technique.

Conclusions with attendant implications that applied primarily to programs of state supervision in agricultural education were drawn from eight alternative hypotheses that were accepted. Opinion leaders were significantly older, more experienced and innovative than their peers. Opinion leaders were significantly higher salaried, had attained a significantly higher education level, exhibited a significantly higher degree of social participation, and held significantly more professional education offices than did their peers. In addition, there was a significant positive correlation between the sociometric and key informant techniques of identifying opinion leaders among teachers of vocational agriculture.

The following were among other conclusions drawn. There was no significant difference in the number of different vocational agriculture teaching positions held by opinion leaders and their peers. There was no significant difference in the amount of their own funds invested in professional growth by opinion leaders and their peers. Opinion leaders were not significantly more cosmopolite than their peers. There was no significant difference in the number of professional education and technical agriculture publications read by opinion leaders and their peers. Opinion leaders were not significantly more satisfied with their jobs than their peers and there was no significant difference in conformity to social system norms on innovativeness of opinion leaders and their peers. In addition, there was no significant correlation between the sociometric and self-designating techniques of identifying opinion leaders."

Lin, Nan; Leu, Donald J.; Rogers, Everett M.; and Schwartz, Donald. *The Diffusion of an Innovation in Three Michigan High Schools: Institution Building through Change*. East Lansing, Michigan: Institute for International Studies in Education and Department of Communication, Michigan State University, December 1966.

The main purpose of this study was to examine the factors that might be associated with various degrees of innovation assimilation in a school.

The study was conducted in three Michigan high schools in which the teachers were asked to complete a questionnaire in a meeting arranged for that purpose. The innovation selected for study was schedule modification.

Dependent variables were:

1. Time of awareness of innovation
2. Time of adoption of innovation
3. Innovation internalization (defined as the extent to which a member of an organization perceived the innovation to be relevant and valuable to his role performance)

4. Change orientation (defined as an individual's degree of general predisposition toward change)

In addition, a large number of independent variables were selected for study in the following categories: demographic variables; institutional variables such as "perception of one's superior," "perception of peers," "perception of school procedural consequences"; communication behavior variables; psychology and personality variables.

For each of these independent variables, it was hypothesized whether its relationship with the four dependent variables would be positive or negative.

Findings are summarized in detail in a separate chapter and are summarized generally at the beginning of the monograph. Correlation of each independent variable with the dependent variables is presented.

An extensive bibliography and all measuring instruments are included.

Lin, Nan. "Innovative Methods for Studying Innovation in Education and an Illustrative Analysis of Structural Effects on Innovation Diffusion within Schools." Paper presented at the National Conference on the Diffusion of Educational Ideas, East Lansing, Michigan: Michigan State University, March 26-28, 1968.

The purpose of this paper is to (1) examine the research methods generally utilized in diffusion research, and (2) to suggest certain research methods which may help provide us with better understanding of the diffusion process.

Research methods that have been utilized have failed to give us wide understanding of the complete diffusion process. To remedy this, we must pay more attention to the decision-making process; further investigate the process of gate-keeping; find out how an innovation is implemented after it has been adopted; and study the effect of innovation upon the education system and its relevant societal environment.

New research methods are needed to answer these conceptual questions. Lin suggests the use of field experiments, computer simulation and structural analysis. Field experimentation and computer simulation are described in general terms; to illustrate structural analysis Lin describes an exploratory study of group structure and innovation diffusion among teachers in three Michigan high schools.

The study concerned innovation internalization and awareness of innovation in relation to a number of communication variables (e.g., upward and downward communication, opinion leadership, number of cliques, etc.) and data were analyzed by matrix multiplication procedures.

Lin found that the educational organization with the highest degree of innovation internalization and smallest variability in first awareness among teachers had a communication structure superior to those in the other two schools.

Thus, the diffusion phenomenon within schools may be explained and predicted from certain structural properties and further research along these lines is needed.

Loy, John W., Jr. "Social Psychological Characteristics of Innovators." *American Sociological Review*. 34:73-82; February 1969.

This study was designed to test generalizations concerning innovativeness from work in rural sociology. It also emphasizes the adequate assessment of theoretically relevant personality variables. Data were collected from 48 English swimming coaches, divided into four adopter categories in terms of their acceptance of a particular innovation. Seventeen social-psychological attributes were considered: innovativeness, socioeconomic status, educational status, professional status, peer status, cosmopoliteness, sociability, intelligence, dominance, surgency, perseverance, venturesomeness, sensitivity, imaginativeness, shrewdness, experimentiveness, and self-sufficiency. Multiple discriminant function analysis was employed to determine whether the four adopter categories were empirically different. The most discriminating variables in order of power were: venturesomeness, professional status, imaginativeness, educational status, dominance, sociability, cosmopoliteness, and self-sufficiency.

Marcus, Alan S. and Bauer, Raymond A. "Yes, There are Generalized Opinion Leaders." *Public Opinion Quarterly*. 28:628-632; 1964.

Katz and Lazarsfeld found in their data on personal influence that if a person was an opinion leader in one area, the likelihood of his being a leader in all three areas studied (marketing, fashion, and public affairs) was greater than chance. However, when they looked at two areas rather than all three, results were mixed.

The present authors conclude that Katz and Lazarsfeld made a calculational error. Taking the original data, they found that there is a small but consistent occurrence of leadership in any two areas that is greater than chance. That is, when one compares fashion with marketing, fashion with public affairs, or marketing with public affairs, there were slightly more individuals considered leaders than would have happened by chance.

Mason, Ralph. "Use of Information Sources by Influentials in the Adoption Process." *Public Opinion Quarterly*. 27:455-466; Fall 1963.

One postulate of the two-step flow hypothesis is that opinion leaders are exposed more to the mass media than those whom they influence.

This study introduces the stages of the adoption process as a variable, using as the main variable relative influence and use of information sources as the criterion variable.

An agricultural setting was used to examine the relationship between use of information sources and relative influence by adoption stage. Respondents were full-time farmers. They were interviewed twice--once to measure relative influence and a second time to determine their information sources and adoption stage.

Three agricultural practices were used to define stage of the adoption process: one, easy and inexpensive; and two, costly and irreversible.

Of three methods for measuring influence: use of influential-influencee dyads; sociometric choice; and self-designation, sociometric choice correlated most highly with the outside criterion variable which was county agent ranking.

Information-source use scores were the dependent variable. Relative influence scores were one dependent variable, and adoption-scale scores were the second. Multiple regression was used to test the null hypothesis and Snedecor's F-test was employed for testing the significance of effects of variables in each equation.

Results: The theory did not hold. In one practice there was no significant difference in use of mass media by relative influence. In the second practice, there was a significant difference in the direction postulated. In the third practice, those low in relative influence made more use of mass media sources.

Adoption stages: The two-step flow hypothesis should be qualified by whether or not an influential has adopted a practice. Those high in relative influence appear to use more information from all sources when the new practice is introduced. After the practice has been evaluated and adopted by these influentials, the relative use they make of mass media sources is attenuated.

The results also suggest that those higher in influence cannot be viewed as "gatekeepers" of information. Those low in influence do not obtain their information about new practices from those high in influence. Use of information from all sources increases as farmers (both low and high influences) pass through the adoption process.

Michigan State Department of Education, Vocational Education RCU. *A Study of the Diffusion Process of Vocational Education Innovations*. East Lansing, Michigan: Michigan State Department of Education, 1967. *Research in Education*. 9:166; September 1967. (ED 011 297). MF $0.25; HC $2.70.

The Michigan RCU undertook to study the process of change in vocational education within the public schools in Michigan. For each of four service areas (agricultural education, business-office education, home economics education, and trade and industrial education) five new practices were selected which varied in terms of recency of invention, complexity and cost.

After these practices were selected, questionnaires were sent to 600 schools having both office education and home economics education; 205 having agricultural education and 189 with trade and industrial education. The following variables were considered:

a. Time lines--to determine the shape of the adoption curves.

b. Communication network--channels and networks of visitation were developed. For each practice in each service area visitations were reported both by visiting and visited schools.

c. Sources of influence--responses as to the way in which the school became convinced to adopt a given practice.

d. New ideas--respondents were asked to indicate new things they were doing and what they considered to be new practices in their areas.

These data were used to compile a list of innovative schools in each of the four service areas. The remainder of the pamphlet discusses each service area separately in terms of the variables being considered.

Mort, Paul R. "Studies in Educational Innovation from the Institute of Administrative Research: An Overview." In Miles, Matthew B., editor. *Innovation in Education.* New York: Teachers College, Columbia University, 1964.

This article is a review of approximately 200 studies that were carried on in the Institute of Administrative Research over the past two decades, dealing with the adaptability of school systems and with the adaptation process. On the basis of these articles, 12 findings can be stated with reasonable firm support:

1. An extravagantly long time elapses before an insight into a need is responded to by innovations destined for general acceptance in the schools.

2. The spread of an innovation through the American school system proceeds at a slow pace.

3. The rate of diffusion of complex innovations appears to be the same as that for simple innovations; innovations that increase cost tend to move more slowly than those that do not.

4. During the slow early period of spread of an innovation, the innovation receives no recognition.

5. Communities vary in the degree to which they can take on new practices.

6. Explanation of the differences in educational adaptability of communities can be found in no small degree in the character of the population.

7. The strength of these population factors appears to be in understandings and expectations.

8. It may be hypothesized that a far stronger school is now in the making.

9. The school must adopt the responsibility that all children shall learn.

10. A valid assessment of an innovation requires examination of the effect of the innovation on the entire system.

11. Knowledge of the slowness of spread of innovations is essential to innovators.

12. Any innovation that is spreading even more slowly than the slow pace that seems normal may well be questioned with respect to authenticity.

Pafford, William N. "Relationships between Innovation and Some School Factors in Kentucky." *School and Society*. 96:438-440; November 1968.

In this study, relationships between the number of innovations in several categories and the following school factors were determined: a quality ranking, mean age of the principals in the school district, length of the superintendent's tenure, local revenue devoted to education, and enrichment expenditure in the district.

A sample of 12 school districts was selected from the Central Kentucky area. A structured interview was then conducted with each district superintendent and in most cases, with one or more supervisors. Schools in the districts then were visited as needed in order to obtain complete data with respect to the number of innovations. Data were obtained from the Kentucky State Department of Education regarding factors to be related to innovation.

Multiple regression was the primary statistical tool.

Findings:

1. The regression coefficient indicates that the more innovative school districts tend to devote more local funds to education than do the least innovative districts.

2. Innovation was not significantly related to mean age of principals, length of the superintendent's tenure, and amount of enrichment expenditure.

3. A significant relationship exists between innovation and educational quality.

4. A significant relationship exists between innovation and the amount of local revenue spent on education.

Rogers, Everett M. *Diffusion of Innovations*. New York: Free Press, 1962.

This is the classic work on the diffusion process, attempting to review and synthesize more than 500 publications in all fields, from a number of countries.

Topics covered include the full range of diffusion research: Traditions of Research on Diffusion; Culture, Norms, and Diffusion; the Adoption Process; Characteristics of the Innovation; Adopter Categories; Innovators as Deviants; Opinion Leaders and the Flow of Ideas; The Role of the Change Agent and the Consequences of Innovation; Predicting Innovativeness, and Toward a Theory of the Diffusion and Adoption of Innovations.

Most chapters include a section on needed research, and a summary at the end of each chapter highlights the main points of the chapter.

An extensive bibliography is included, as well as a series of 52 generalizations which summarize the major findings of what is known about the diffusion of innovations.

A revised edition of this work should be available soon.

Rogers, Everett M. "What are Innovators Like?" *Theory into Practice*. 2: December 1963.

Summary of characteristics of innovators:

Innovators generally are young.

Innovators have relatively high social status, in terms of amount of education, prestige ratings and income.

Impersonal and cosmopolite sources of information are important to innovators.

Innovators are cosmopolite.

Innovators exert opinion leadership.

Innovators are likely to be viewed as deviants by their peers and by themselves.

Rogers, Everett M. and Cartano, David G. "Methods of Measuring Opinion Leadership." *Public Opinion Quarterly*. 26:435-441; 1962.

Research evidence from several investigations of opinion leadership can be synthesized by the following three generalizations:

1. Opinion leaders deviate less from group norms than the average group members.
2. There is little overlap among the different types of opinion leaders.
3. Opinion leaders differ from their "followers" in information sources, cosmopolitanism, social participation, social status, and innovativeness.

Three major methods exist for measuring opinion leadership--these are the sociometric, key informant, and self-designating. The self-designating technique is explained in some detail. Evidence indicates that the six-item self-designating opinion leadership scale is reliable, valid, and unidimensional.

Rogers, Everett M. and Stanfield, J. David. "Adoption and Diffusion of New Products: Emerging Generalizations and Hypotheses." Paper Presented to American Marketing Association, 1966.

This paper is intended as an overview of the field of diffusion research in terms of formulating generalizations that have emerged.

Before synthesizing research findings, the authors consider the research traditions in which diffusion research has been conducted. More than half the research conducted in diffusion has been in the field of rural sociology and half the publications now available in the diffusion of innovations were completed since 1960.

The authors then explain the workings of the Diffusion Documents Center at Michigan State.

Generalizations gleaned from the authors' synthesis of DDC materials are divided into the following categories: (a) social and attitudinal correlates of innovativeness, (b) characteristics of the innovation related to innovativeness, (c) methodologies related to diffusion research.

The last pages provide a useful collection of 22 generalizations, summarizing over 2400 empirical findings from diffusion research.

Rollins, Sidney P. and Charters, W. W., Jr. "The Diffusion of Information Within Secondary School Staffs." *Journal of Social Psychology*. 65:167-178; 1965.

Proposition: The extent of information diffusion is a function of the established patterns of interaction existing within a school faculty.

Degree of saturation: The degree of articulation of communication bonds within schools.

Four secondary schools in the metropolitan area of St. Louis County, contrasting in the degree of articulation of communication contacts among their teaching faculties, were chosen for testing two hypotheses: (a) the greater the articulation ("saturation") of staff contacts, the greater will be the diffusion of an item of information transmitted informally from the principal to teachers; (b) the greater the number of communication contacts of a given staff member to whom information is transmitted by the principal, the greater will be the number of staff members to whom he will relay it.

A message was fabricated by the investigators, and through the cooperation of high school principals, transmitted to three teachers, varying in the number of their communication contacts. Three days later, a questionnaire form was distributed to all teachers to measure the extent to which the information had diffused among them and to discover from whom they had received the information. The experiment was repeated two weeks later with a different message.

The results showed that, contrary to the first hypothesis, greater diffusion occurred in the low saturation schools than in the high saturation schools, but in accordance with the second hypothesis, the number of relays of information was a direct function of the input teacher's span of communication contacts. The investigators suggested that the incongruous finding could be explained if school differences in the degree of saturation of communication bonds were interpreted as reflecting the level of morale, and inversely, the extent of anxiety within the faculties.

Rosner, Martin M. "Economic Determinants of Organizational Innovation." *Administrative Science Quarterly*. 12:614-625; March 1968.

This study correlates the promptness and frequency with which a group of hospitals tried new drugs with measures of economic orientation and organizational slack.

(Organizational slack: The difference between the payments required to maintain the organization and the revenue obtained from the environment; the source of resources of the organization.

Economic orientation: The degree of preference that an organization has for low costs.)

The hospital sample consisted of 24 non-teaching short-term voluntary hospitals located in the Chicago area. Frequency of trial of new drugs was measured by responses to a questionnaire on drug use. Promptness of trial was traced by means of credits of purchase invoices.

Organizational slack was measured by hospital occupancy rates; economic orientation was measured by drug costs and drug inventory turnover rate.

Multiple regression analysis was employed and a number of factors were controlled.

Hypotheses:

1. As the occupancy rate of the hospital increases, the frequency of trial of new drugs will increase.
2. As the occupancy rate of the hospital increases, the promptness of trial of new drugs will increase.
3. As the economic-orientation score of the hospital increases, the frequency of trial of new drugs will increase.
4. As the economic-orientation score increases, the promptness of trial of new drugs will decrease.

Results were in the appropriate direction, but not statistically significant.

Sapolsky, Harvey M. "Organizational Structure and Innovation." *Journal of Business.* 40:497-510; October 1967.

James Q. Wilson in an article entitled "Innovation in Organization" hypothesizes that: (1) the greater the diversity of an organization, the greater the probability that members will conceive of major innovations; (2) the greater the diversity of the organization, the greater the probability that major innovations will be proposed; and (3) the greater the diversity of the organization, the smaller the proportion of major innovations that will be adopted.

In this paper, the authors test these propositions by examining the proposals for change in nine department stores. Data were collected by interviews with 44 buyers and executives.

Specific proposals for change examined were: (1) the separation of buying from the selling functions, (2) the applications of computers to merchandising problems, and (3) the introduction of sophisticated decision-making techniques in retail operations.

These proposals were not widely implemented, and Wilson's three hypotheses are confirmed. The author concludes that diversity in department store structural arrangements, the decentralization of decision-making authority, and the existence of a large amount of equally situated subunits frustrated attempts to implement these proposals.

Sieber, Sam D. with the collaboration of Lazarsfeld, Paul F. *The Organization of Educational Research in the United States.* New York: Bureau of Applied Social Research, Columbia University, 1966.

Abstract: From Havelock, Ronald G.; Huber, Janet; and Zimmerman, Shaindel. (editors) *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices.* Ann Arbor: Center for Research on Utilization of Scientific Knowledge, University of Michigan, October 1969.

"This report of a study conducted among administrators of educational research is lengthy and rather technical. However, it is an interesting analysis of leadership and its influences on educational research in a university setting.

The report contains no index or bibliography and is probably of limited value to educational practitioners in general. It would be most informative to policy makers in research or professional training programs."

Smith, Alfred G. *Communication and Status: The Dynamics of A Research Center.* Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1966.

This study observed and analyzed the internal communications of a research center. The goal was to determine who sends what messages to whom over which channels.

Data were gathered from interviews of the staff, designed to fill in matrices of interaction among the people working for the center.

The members were grouped in terms of their perceived statuses. Most communication takes place within these status groups, and little takes place across group boundaries. These divisions and groupings regulate communication within the center.

The study also found that many of the communication practices of the center can be analyzed in terms of two overall status categories: the organization man and the research man. These status-sets cut across the officially established ranks and functional divisions of the center. An emphasis on the organization and an emphasis on research reflects a basic division within the center.

In addition, the study analyzed the social communication within the center. It found relatively little social communication, and found that the influence of social communication was relatively small. Finally, it examined the changes in the patterns of communication during the first year of the center's existence. It found that the center had become more bureaucratic and impersonal.

Troldahl, Verling C. "A Field Test of a Modified 'Two-Step Flow of Communication' Model." *Public Opinion Quarterly*. 30: 609-623; Winter 1966-1967.

The purpose of the study was to test an elaboration of the two-step flow hypothesis. Some researchers have found that, when dealing with mass media information on important events, the flow is directly to people and is not relayed to any great extent. At least for learning effects, there is a one-step flow of information, direct from the mass media to social system members; the two-step flow seems more adequate as a description of the flow of media influence on beliefs and behavior. Based on this research evidence, the author uses "balance" theory to build a conceptual model of the communication process.

Testable assertions:

1. Among opinion leaders and followers exposure to mediated communication alone will produce awareness of message content.

2. Among opinion leaders, exposure to mediated communication alone will induce belief change (this is not expected for followers).

3. Followers whose present beliefs are inconsistent with observations and beliefs in a message are induced by exposure to mediated communication to ask for advice on the message topic.

4. Opinion leaders who ask for advice talk to "professional intermediaries" more frequently than followers do.

5. Opinion leaders seek advice from intimates less often than followers.

6. Opinion leaders and followers who ask for advice about the message topic after being exposed to mediated communication will exhibit more belief change than persons who do not ask for advice.

These assertions were tested with a random sample of 318 subscribers to the *Middlesex County (Massachusetts) Bulletin*, by interviewing them. An experimental message was inserted into the *Bulletin*, and both the sample and a control group who did not see the message were interviewed.

Assertion 1 was confirmed for followers but not opinion leaders. Assertion 2 was not confirmed. Assertion 3 was inconclusive; assertions 4 and 5 were not confirmed.

Winick, Charles W. "Diffusion of an Innovation among Physicians in a Large City." *Sociometry*. 24:384-396; 1961.

This is a report on the extent to which sociometric and other interpersonal dimensions appear to be significantly related to the diffusion of an innovation among physicians in a large city--in other words, this study attempts to replicate drug diffusion studies done in small towns, using a city with over three quarters of a million people.

Asked to name three most important sources of information, it was found among these doctors that there appear to be only minor differences between the innovator group which tried the drug in the first two months and the group which tried it in the next two months. The physicians who were slow in trying the new drug differ from the more rapid adopters in their tendency to pay some heed to nonprofessional sources, while the more rapid adopters seem to be more sensitized to professional sources. For all groups, however, the traditional commercial sources of journals and detail men seem to be the most important sources of information.

Sociometric choice does not appear to be significantly correlated with use of the drug.

THEORETICAL OR NON-EMPIRICAL WORKS ON THE CHANGE PROCESS

Becker, Selwyn W. and Whisler, Thomas L. "The Innovative Organization: A Selective View of Current Theory and Research." *Journal of Business*. 40:462-469; October 1967.

The purpose of this paper is to review the other papers in this particular issue of the *Journal of Business*, to relate them to existing literature on organizational innovation, and to make an estimate of the current state of theory and research on innovation.

The authors define innovation as the first or early use of an idea by one of a set of organizations with similar goals. Current theories of innovation usually focus on inputs (variables predisposing organizations to innovate), on outputs (number and kind of innovations adopted), and process (the sequence of events from input to output). Much attention is devoted to classification of innovations.

When we look at the organizational processes associated with innovative or non-innovative behavior, we find substantial agreement. All authors seem to visualize a four-stage process which hooks up with particular inputs and outputs specified--these four stages are stimulus, conception, proposal and adoption.

Innovation theorists generally terminate their analysis at the adoption stage.

An adequate theory of organizational innovation awaits a careful statement of both environmental and internal inputs and explicit analysis of the interrelationship of these two classes of inputs.

Bhola, Harbans Singh. "The Configurational Theory of Innovation Diffusion." Columbus, Ohio: Ohio State University School of Education, 1965.

Bhola's purpose is to formulate an event theory of diffusion, a theory focusing on the diffusion event and contributing insights towards making the diffusion event more probable. Such a theory needs to encompass both individuals and groups, and it needs to be interdisciplinary, inter-situational and intercultural.

The theory presented is designed to explain the process of innovation diffusion and predict success or failure of innovation diffusion plans and projects. It is called the configurational theory of innovation diffusion because of the emphasis put on patterns of relationships between innovators and adopters.

The theory itself is as follows:

$D=f(CLER)$

In descriptive terms, diffusion (D) of an innovation is a function (f) of the configurational (C) relationship between the Initiator (i) from a class of such Initiators and the Target (j) from a class of such targets; the extent and nature of Linkages (L) between and within configurations, the environment (E) in which the configurations are located, and the resources (R) of both the Initiator and Target configurations.

Bhola then elaborates on each of the elements of his schema, ending by generating 10 hypotheses from his theory, in terms of predicting how the diffusion process will occur.

Bhola, Harbans Singh. "Innovation Research and Theory." Paper presented at the Conference on Strategies for Educational Change, Washington, D.C., November 8-10, 1965.

Abstract: From *Strategies for Educational Change Newsletter*. Ohio State University School of Education, December 1965.

"This paper took a broad view of innovation research and theory, summarizing important diffusion-related research from most foundational disciplines of social change such as anthropology, sociology, economics, communications, and behavioral sciences generally.

A descriptive taxonomy based on the content of possible questions that might be raised in this area was suggested. The review of research and theory was organized around five major categories of this taxonomy: (1) philosophic considerations, (2) the content of innovation, (3) the nature of inventors, (4) the process and tactics of diffusion, and (5) measurement and evaluation of change.

The final section of the paper presented a methodological perspective listing methodological approaches used or possible in the investigation of change."

Brickell, Henry M. *Organizing New York State for Educational Change*. Albany, New York: New York State Department of Education, December 1961.

The purpose of this study is to make recommendations for statewide action to achieve the following purposes: (1) evaluating new practices and devices, (2) initiating and expanding constructive experimentation in the schools, and (3) facilitating and accelerating widespread use of practices and devices which have been proved or may be proved successful in the schools of New York State and elsewhere.

Brickell proposes three phases of instructional innovation: design, evaluation, and dissemination. To implement these phases, a number of organizational changes are proposed.

Campbell, Rex R. "A Suggested Paradigm of the Individual Adoption Process." *Rural Sociology*. 31:458-466; December 1966.

This article questions the adequacy of the individual adoption process model for delineating the adoption process as it occurs in all of its variations. Author proposes instead a paradigm that allows more variation in the process and is constructed around two dichotomies: rational or non-rational decisions and innovation or problem-oriented ones. Thus, four, ideal-typical adoption processes are created when these dichotomies are combined: (1) rational problem-oriented; (2) rational innovation-oriented; (3) non-rational problem-oriented; and (4) non-rational innovation-oriented. The author discussed the applicability of the model to real-life decisions and to research.

Carlson, Richard O. "Summary and Critique of Educational Diffusion Research." Paper presented at the National Conference on the Diffusion of Educational Ideas. East Lansing, Michigan, March 26-28, 1968.

Carlson divides diffusion into seven elements: the (1) acceptance; (2) over time; (3) of some specific item--an idea or practice; (4) by individuals, groups, or other adopting units, linked to; (5) specific channels of communication; (6) to a social structure; and (7) to a given system of values or culture.

In the remainder of the paper, he considers each of these elements separately, in terms of research carried out in the field and research that should be done.

The main deficiencies of diffusion research are these: "(1) large variation in the meaning of acceptance of an innovation, (2) inadequate documentation of the fact of acceptance of an innovation, (3) insufficient attention paid to time of adoption, (4) failure to carefully identify the essential elements of an innovation and test whether all essential elements were present in scoring an adoption, and (5) the absence of a classification scheme of innovations which would permit comparisons of what now exist as discrete studies."

In addition, Carlson cites the lack of concern with organizational theory, the roles of communication, social structures, and value systems in research on educational innovations.

Clark, David L. and Guba, Egon G. "An Examination of Potential Change Roles in Education." Paper presented at the Seminar on Innovation in Planning School Curricula, Airelhouse, Virginia. October 2-4, 1965.

This paper proposes a classification schema of processes related to and necessary for change in education.

The change function most appropriate to the school would seem to be trying, installing and institutionalizing changes which have an efficacious impact on the system, and the "research-like" emphasis of the system. Activities in accomplishing this function might be described with a term such as "operations research" or "quality control."

The schema itself: Guba and Clark have arrived at a simple four-phase division of the processes which take place as a field attempts to develop and subsequently integrate new knowledge into more effective practice. These processes are:

1. Research
2. Development (including Invention and Design)
3. Diffusion (including Dissemination and Demonstration)
4. Adoption (including Trial, Installation and Institutionalization).

For each of these phases, the Objectives, Criteria, and Relation to Change are stated.

Guba and Clark then pose a series of propositions related to the process of change as they have stated it.

A second section of the paper discusses change roles in relation to each of the four processes and makes specific recommendations as to how these change roles can be implemented.

Clark, David L. and Guba, Egon G. "Effecting Change in Institutions of High Education." UCEA International Inter-Visitation Program paper. October 1966.

Clark and Guba revise their earlier schema on change processes in education. In this current schema, they outline eight functions which must be performed to effect change:

1. Gathering operational and planning data
2. Inventing solutions to operating problems
3. Engineering packages and programs for operational use
4. Testing and evaluating packages and programs
5. Informing target systems about packages and programs
6. Demonstrating the effectiveness of packages and programs
7. Training target systems in the use of packages and programs
8. Servicing and nurturing installed innovations.

A dysfunction exists, however, between the logic of the change programs and any visible efforts to mount programs of planned change in institutions of higher education. The authors try to account for this dysfunction by outlining cultural and behavioral patterns impeding changes in institutions of higher education.

Self-improvement in the university is going to require special attention to: "(1) the acceptance of at least minimal application of organizational theory and managerial processes, (2) utilization of the unique legitimate elements of the institutional culture, and (3) provision of specific and identifiable resources to the process of change."

Finley, James. "Farm Practices Adoption: A Predictive Model." *Rural Sociology*. 33:5-18; March 1968.

Objectives of this paper are twofold: (1) to describe a qualitative model for prediction, (2) to illustrate the use of the method by predicting the adoption behavior of Ohio farmers.

Using the configurational or classification method of prediction, a prediction instrument was constructed from a statewide random area sample and was validated by testing it with data available from the same sample at a second point in time and from county-wide samples within the same state.

Factors selected as predictors, on the basis of certain criteria were: (1) age of farm operator; (2) education; (3) size of operation, including acres farmed, productive man work units and gross farm income; (4) social status; (5) contact with information sources; (6) formal participation; and (7) self-perception of adoption behavior.

Innovation scales were used as the measure of adoption behavior. The instrument was effective for 85 percent of the cases in the original sample, and approximately 75 percent of the cases from the validating samples.

Griffiths, Daniel E. "Administrative Theory and Change in Organizations," in Miles, Matthew B., editor, *Innovation in Education*. New York: Columbia University, 1964.

This paper attempts to present a theory of administrative change which will account for some commonly made observations concerning change in organizations. Two questions are considered: (1) Under what conditions does change occur? (2) Under what conditions is change least apt to occur?

The author uses system theory as a model and generates the following propositions from the model, which he discusses in some detail:

1. The major impetus for change in organizations is from the outside.

2. The degree and duration of change is directly proportional to the intensity of the stimulus from the supra-system.

3. Change in an organization is more probable if the successor to the chief administrator is

from outside the organization than if he is from inside the organization.

4. "Living systems respond to continuously increasing stress first by a lag in response, then by an over-compensatory response, then finally by catastrophic collapse of the system."
5. The number of innovations is inversely proportional to the tenure of the chief administrator.
6. The more hierarchical the structure of an organization, the less the possibility of change.
7. When change in an organization does occur, it will tend to occur from the top down, not from the bottom up.
8. The more functional the dynamic interplay of subsystems, the less the change in an organization.

Guba, Egon G. "Diffusion of Innovations." *Educational Leadership*. 25:292-295; January 1968.

The diffuser needs a strategy for diffusion, i.e. some action plan which will result in the innovation involved coming to the attention of those practitioners who ought to know about it. If the diffuser is to have a successful strategy, he must pay attention to five sets of factors:

1. Diffusion techniques.
2. Assumptions concerning the nature of the adopter.
3. Assumptions concerning the end state in which one wishes to leave the adopter.
4. Assumptions about the nature of the agency.
5. Assumptions concerning the substance of the invention.

Guba, Egon G. "Methodological Strategies for Educational Change." Paper presented at the Conference on Strategies for Educational Change, Washington, D.C., November 8-10, 1965.

Abstract: From *Strategies for Educational Change Newsletter*, Ohio State University School of Education, December 1965.

"The paper was addressed directly to the researcher. Two general strategies available to an investigator of social change were identified as (1) experimental and (2) a-experimental.

It was indicated that in the present state of theorizing and research in educational change, experimental techniques might be premature, while the field study approach was probably more suited, for reasons of the particular setting of change research, the level of control, the breadth of focus of change studies, number of variables and treatments involved, and the context of events being investigated.

Some illustrative tactics for field studies suggested were: (1) programmatic approach to selection of research objectives based on logical priorities, (2) explication of theoretical and logical framework of study, (3) coping with the realities of the field situation and availing of new openings when available, (4) replication and recycling of data to build accumulative evidence, (5) use of quasi-experimental designs whenever possible, (6) substitution of purposeful focusing to make up for a lack of experimental control, (7) development of techniques for collecting "educational evidence" to study change and its consequences, (8) emphasis on logical inference rather than statistical inference, and (9) analysis of pathologies--field studies that turned out badly--to gain insights."

Guba, Egon G. "The Process of Educational Innovation." Goulet, Richard R., (editor), *Educational Change: The Reality and the Promise*. New York: Citation Press, 1968.

True educational improvement depends on the successful implementation of the four major phases of the change process: research, which provides one basis for invention; development, where practical solutions to existing problems are formulated; diffusion, where inventions are made available and understandable to the practitioner; and adoption, where inventions are adapted to local situations and implemented there.

The present implementation of each of these steps is hampered by certain problems including overlapping and lack of communication in the process of change. One possible solution to these problems is a formulation in which responsibility for the change stages would be firmly fixed, each phase being designated to a specific educational organization.

Havelock, Ronald G. in collaboration with Guskin, Alan. *Planning for Innovation through the Dissemination and Utilization of Knowledge*. Ann Arbor, Michigan: Center for Research on the Utilization of Scientific Knowledge, University of Michigan.

Abstract: From Havelock, Ronald, *et al.*, *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices*. Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, October 1969.

"This is a report to the Office of Education on 'comparative survey and theoretical analysis of the literature in several fields,' including mental health, agriculture, medicine, public health, law, business management, and technology, and with a special emphasis on the field of education. Concepts for the analysis are drawn from social psychology, sociology, and communication science.

It includes a bibliography with about 3,500 entries. Research evidence is presented as well as theoretical concepts. The final chapter offers a synthesis and draws implications for research, development, practice, and policy related to dissemination and utilization.

This study is most relevant to researchers or scholars concerned with the change process in the several fields represented."

Havelock, Ronald G.; Huber, Janet C.; and Zimmermann, Shaindel. *The Knowledge Linker's Handbook*. Ann Arbor, Michigan: Center for Research on the Utilization of Scientific Knowledge, University of Michigan.

Abstract: From Havelock, Ronald, *et al.*, *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices*. Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, October 1969.

"This handbook is aimed at those educators who find themselves in the position of introducing innovations into school systems, i.e. 'linking' resources to practice. It is designed to be useful for processing change at any level in education from state system to classroom. The chapter discussions are ordered to present a logical development of the linking process from the point of view of the knowledge linker/change agent.

There is an introduction, a selected bibliography, and an index. Empirical cases are cited in the form of illustrative examples."

Havelock, Ronald G. and Benne, Kenneth D. "An Exploratory Study of Knowledge Utilization." in Watson, Goodwin, editor. *Concepts for Social Change*. Washington, D.C.: Cooperative Project for Educational Development, National Educational Association, 1967.

Education is a field that has been viewed as underdeveloped and irrational in the knowledge retrieval and utilization practices. This paper is intended as a guideline for developing what we need for effective knowledge utilization in education.

This paper considers four issues: (a) the need to study utilization, (b) utilization as a system: the structure of utilization, (c) utilization as a process, (d) building a program of research utilization.

Knight, Kenneth E., "A Descriptive Model of the Intra-Firm Innovation Process." *Journal of Business*. 40:478-496; October 1967.

The process of organizational innovation consists of two major phases: (1) the creation of the idea and its development, and (2) the introduction and adoption of the idea. Most research on innovation has been directed towards the first phase.

The author reviews the literature on conditions for creativity, and then concentrates on how innovation occurs in an organizational context.

A set of hypotheses are generated concerning types of innovation, the general model of organization research, the innovator's problem-solving processes; and formal and informal power to innovate. The conclusion is that innovation is a slow evolutionary process.

Lionberger, Herbert F. "The Diffusion Research Tradition in Rural Sociology and its Relation to Implemented Change in Public School Systems." in Meierhenry, Wesley C., editor.

Media and Educational Innovation. University of Nebraska Press, 1964.

This paper is concerned with the achievements of diffusion in agriculture and related fields and the implications of its substantive findings for implementing changes in school systems.

Lionberger discusses research achievements in eight areas of agricultural diffusion research: (1) use of process and stage concepts as a means of explaining the adoption of innovations by individuals; (2) definition of the functions performed by individuals in the individual adoption process; (3) conceptualization of function performed by individuals in the individual and community adoption processes; (4) examination of the correlates of change acceptance by farmers with attempts to predict farm practice adoption rates; (5) definition of adoption sequences and patterns and thus the community adoption process; (6) study of structural features in the communicative behavior of individuals about innovation; (7) "role of change agent" studies, which open the way for partially assessing the influence of outside social systems on the adoption of practices by individuals; and (8) definition of characteristics of innovations which have a bearing on acceptance rates. Then, limitations of this research is reviewed.

Compared to agriculture, distinctive problems of implementing changes in complex social systems, such as public schools, are that collective decisions and modification of institutionalized structures are necessary and that sources of information are not institutionalized as in agriculture. Even so, some action and research implications for changes in complex social systems are suggested.

Lippitt, Ronald and Havelock, Ronald. "Needed Research on Research Utilization." Paper presented at the National Conference on the Diffusion of Educational Ideas, East Lansing, Michigan, March 26-28, 1968.

This paper is divided into two parts. In Part I, Lippitt focuses attention to the internal conditions needed if knowledge is to be utilized--the processes of linkage within the adoption or utilization unit. In Part II, Havelock analyzes the external conditions which facilitate or prevent the new knowledge resources from reaching the potential user.

Part I tries to answer five questions:

1. What are the entry conditions that help to link the potential knowledge consumer to an external knowledge resource?

2. In what ways can new knowledge be presented so that it is perceived and received as relevant?

3. What type of interaction with new knowledge and with its source, supports the exploration, incorporation, and adaptation of the new knowledge?

4. What process of interaction with the new knowledge results: (a) in linking the knowledge to commitments to try and (b) in connections between commitments to try and actual utilization in output?

5. What are the conditions of tryout that support the successful adaptation effort and support the maintenance of that effort after a first try?

In Part II, the author discusses in detail four major aspects of the social content of utilization, in other words, the social system: first, the linking person or linking role; second, the linking organization; third, the temporary linking system; and finally, the permanent linking system.

Lippitt, Ronald and colleagues. "The Teacher as Innovator, Seeker, and Sharer of New Practices." in Miller, Richard I., editor. *Perspectives on Educational Change*. New York: Appleton-Century-Crofts, 1967.

Lippitt and colleagues have investigated the spread of innovations among teachers in several school systems, representing a large and varied sample of elementary and secondary classroom teachers.

Two different types of bridging processes linking teachers to new resources and supporting their improvement efforts have been studied. One form is vertical linking: the teacher uses resources he gets from some higher status person or expert in his innovative or adaptive efforts. The second form is horizontal linking: connecting the teacher to other teachers, who are interested in sharing or adopting relevant teaching innovations.

Current work by the author involved bringing teachers together to discover some of the forces that facilitate or hinder the innovation, diffusion, and adoption process. Briefly, these forces are:

1. The innovation itself.
2. Physical and temporal arrangements of the school building and school responsibilities.
3. Social structure of the school.
4. Personal characteristics of teachers.

These forces are outlined in detail. The authors also describe their current research on stimulating the innovation-diffusion process and on those factors in the school communication structure that facilitate or hinder diffusion and adoption.

Miles, Matthew B. "Educational Innovations: Some Generalizations." in Meierhenry, Wesley B. *Media and Educational Innovation*. University of Nebraska Press, 1964.

This paper reviews a series of "first-level" generalizations drawn from 24 papers on educational innovation--case studies, research and speculative attempts--drawn from a recent volume on this subject (Matthew Miles, *Innovation in Education*). For convenience they are stated flatly here--supporting evidence and claims for their validity appear in the original papers.

The generalizations are arranged in an accounting scheme covering characteristics of educational systems, the innovation itself, innovating persons or groups, states of the "receiving system prior to and during change processes" and the eventual fate of innovations advocated.

Miles, Matthew B. "Planned Change and Organizational Health: Figure and Ground." in Center for the Advanced Study of Educational Administration, editor. *Change Processes in the Public Schools*. Eugene, Oregon: CASEA, 1964.

Miles outlines 10 characteristics of organizational health: (1) Goal focus, (2) Communication adequacy, (3) Optimal power equalization, (4) Resource utilization, (5) Cohesiveness, (6) Morale, (7) Innovativeness, (8) Autonomy, (9) Adaptation, and (10) Problem-solving adequacy.

Educational systems, however, have certain properties which make them depart from this general model of organizational health. The major difficulties to be expected in most public schools would center around goal focus, difficulties in communication adequacy and power equalization stemming from low interdependence, and perhaps most centrally, failures in innovativeness, autonomy, adaptation and problem-solving adequacy, because of vulnerability and lay-professional conflict.

Six "interventions" are listed which contribute to improved organizational health: (1) Team training, (2) Survey feedback, (3) Role workshop, (4) "Target setting" and supporting activities, (5) Organizational diagnosis and problem-solving, (6) Organizational experiment.

Miller, Richard I. "Implications for Practice from Research on Educational Change." Paper presented at the National Conference on the Diffusion of Educational Ideas, March 26-28, 1968, East Lansing, Michigan.

This paper is concerned with the societal, regional and state dimensions of the change process.

The author discusses a number of new forces for change, including the Elementary and Secondary Education Act of 1965 (especially Title III), the Regional Educational Labs, and the Research and Development Centers. In spite of these new programs, however, we are in great need of more intelligent approaches to new major federal legislation in education. The author suggests an "Experimental Schools Act" and an organization in education like the Committee on Economic Development in Business and Industry.

Needed research in a number of areas is proposed.

Pellegrin, Roland J. *An Analysis of Sources and Processes of Innovation in Education*. Eugene, Oregon: University of Oregon, 1967.

This publication reviews existing and potential sources of educational innovation, the conditions under which innovation occurs, and the changes which must be made to tie together knowledge and practice. The author considers a number of sources of current educational innovation, including: (1) classroom teachers; (2) school administrators; (3) school board; (4) the lay public; (5) State Departments of Education; (6) education faculties of colleges and universities; (7) professional associations; (8) U.S. Office of Education, and other federal agencies; (9) textbook publishers; (10) scientists, technical specialists, and other experts. Certain conditions fostering or discouraging innovation are discussed, along with conditions for translating knowledge into practice in educational settings.

Rogers, Everett M. "Communication of Innovations in a Complex Institution." *Educational Record.* 49:67-77; Winter 1968.

Rogers' suggests the following strategy for change in a large university:

1. Develop and select innovations that have a clear-cut relative advantage and test their effectiveness under operational conditions before adopting them on a widespread scale.
2. Establish an organization within the university to facilitate change and self-renewal in its social structure.
3. Establish an organized procedure within the large university of informing those at the top, accurately and rapidly, of the need for change at the lower levels of the hierarchy, and the actual consequences of attempted innovations.
4. Utilize personnel recruitment, selection, and training policies that encourage development of a staff oriented to innovative approaches.
5. Utilize informal interpersonal channels of communication to diffuse innovations.

Rogers, Everett M. and Jain, Nemi C. "Needed Research on Diffusion within Educational Organizations." Paper presented at the National Conference on the Diffusion of Educational Ideas, East Lansing, Michigan, March 26-28, 1968. *Research in Education.* 8:179; August 1968. (ED 017 740) MF $0.25; HC $1.80.

Diffusion research has suffered from two biases: first, it has been largely a tool on the side of the sources, not the receivers, of innovation diffusion. Secondly, it has focused upon individual, rather than structural and organizational, variables. This paper considers directions that the study of diffusion within organizational structures might take.

Methodologically, this paper calls for relational and structural analysis. In relational analysis, "measurement devices center around some type of sociometric question, the data-gathering techniques consist of sampling intact groups or pairs of individuals, and data-analysis methods amount to using the dyad, chain, or subsystem as the unit of analysis."

Structural effects are effects of the social structure of the system of which one is a member on his behavior. Recent investigation indicates that structural effects may be important in explaining individual innovative behavior.

Conceptually, four interrelated categories of variables should be studied: diffusion effects variables, communication variables, social system variables, and consequences variables. "Social system variables affect communication variables, which in turn affect the diffusion effects variables, and these diffusion effects lead to consequences variables."

These four categories are elaborated upon at length.

Ross, Donald H., (editor). *Administration for Adaptability*. New York: Metropolitan School Study Council, Teachers College, Columbia University, 1958.

Abstract: From Havelock, Ronald, *et al.*, *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices*. Ann Arbor: Center for Research on Utilization of Scientific Knowledge, University of Michigan, October 1969.

"This book reviews studies of the adaptation process in school systems from the 1930's through 1957. They were primarily the work of Paul Mort.

As a source book, it draws together the results of more than 150 individual studies related to the question of why and how schools improve."

Rubin, Louis J. "Installing an Innovation." in Goulet, Richard R., (editor). *Educational Change: The Reality and the Promise*. New York: Citation Press, 1968.

"Using innovative paint to make a blue program red is not the solution to any educational problem. Educational innovation and improvement are related, but they are certainly not the same. Though schools must make a rational effort to capitalize on the new, they should make an equal effort to correct old methods, even if the correctives prescribed may be five or ten years old."

To innovate, the four basic phases of the change process must be considered: research, development, dissemination, and installation. The installation phase is the most problematic and the most crucial to schools. To effectively install an innovation, educators must first make a preliminary analysis and then select an appropriate strategy. The difficulties at the core of a school or system must be examined, and adequate preparation must be made, including provisions for the retraining of personnel.

Sarason, Seymour B. "The School Culture and Processes of Change." The Brechbill Lecture, University of Maryland, January 10, 1966.

The school is characterized by a relative lack of meaningful, open, and sustained discussion among school personnel about their work, goals, professional problems, and explicit or implicit theoretical orientation. This fact, and other aspects account adequately in introducing change into the school. Our lack of understanding of several aspects of the school culture discussed here explains past and present resistance to change.

Sarason, Seymour B. "Toward A Psychology of Change and Innovation." Psi Chi Address at American Psychological Association, New York, September 1966.

As does the above paper, "The School Culture and Processes of Change," the author claims we must understand the culture of the school if we wish to understand change. He emphasizes the marked discrepancy between the number of proposals to change the system and the number of proposals actually implemented. The author suggests that the fate of any single proposal for change in a school will be determined in part by the number of changes which have been proposed but never implemented.

Shepard, Herbert A. "Innovation-Resisting and Innovation-Producing Organizations." *Journal of Business*. 40:47-77; October 1967.

This article is an examination of a particular class of innovations: those which change an innovation-resisting organization into an innovation-producing organization, or vice-versa.

I. *The Process of Innovation in Innovation-Resisting Organizations*: In order to break the cycle that takes place in the innovation-resisting organization, a number of strategies are discussed; concealing the innovation from the rest of the organization, for example.

Innovation in this situation requires an unusual combination of qualities.

II. *Innovation in Innovation-Producing Organizations*: An innovation-producing organization is one which is continuously learning, adapting to change within itself and the environment, and successfully innovating in that environment.

One characteristic of innovative organizations is periodicity. Innovation requires an open system with superordinate goals held in common--a climate of openness and mutual support.

III. *Innovations which Help an Innovation-Resisting Organization become an Innovation-Producing Organization*: Movement towards an innovation-producing organization requires processes of personal and interpersonal reeducation so that more of us develop the qualities of independence and capacity for autonomous interdependence attributed to the ideal innovator.

Sieber, Sam D. "Organizational Resistance to Innovative Roles in Educational Organizations." *Research in Education.* 3:45; June 1968. (ED 015 536) MF $0.25; HC $1.70.

Abstract: From *Research in Education.* 3:45; June 1968.

"Four main aspects of the public education system limit the application of diffusion research from other social systems (medicine, industry, and agriculture) to the field of education:

1. Because of school system vulnerability, changes that run the risk of disturbing the local community are eschewed, innovations that are persuasively publicized are likely to be adopted without sufficient evaluation, and educational experimentation is limited.
2. Because of quasi-professionalism, teachers are inclined to resist innovations, whether proposed by administrators, consultants, other teachers, or laymen.
3. Because of goal diffuseness, teachers tend to stress instructional or learning-process goals, while parents desire stress on substantive and terminal goals.

4. Because of formal control within the educational organization, deviant or innovative behavior by teacher members of the system is seriously limited.

These four variables are conceptualized in a model that incorporates 28 interrelated structural sources of resistance to educational innovation. A new "status occupant" strategy, emphasizing the role of the teacher as innovator, is proposed for inducing educational change. By incorporating the positive features of three existing strategies (rational man, cooperator, and powerless participant) the new strategy seeks to overcome difficulties arising from the dominant local, national and auxiliary organizational properties of education."

This paper was presented at the UCEA Career Development Seminar, Co-sponsored by the University Council for Educational Administration and the University of Oregon, October 22-25, 1967, Portland, Oregon.

Willower, Donald J. "Barriers to Change in Educational Organization." Theory into Practice. 2; December 1963.

One important source of resistance is found in the real or perceived threat that change poses to status.

Resistance may also occur when the proposed change promises benefits to one part of the organization at the expense of other parts.

Organizations are hierarchical in structure and when change is imposed from above, resistance is likely.

Woods, Thomas E. *The Administration of Educational Innovation.* Eugene, Oregon: Bureau of Educational Research, School of Education, University of Oregon, 1967.

Abstract: From Havelock, Ronald, *et al.*, *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices.* Ann Arbor: Center for Research on Utilization of Scientific Knowledge, University of Michigan, October 1969.

The author describes the process of planned change from the point of view of the school superintendent. It is presented in a style that is very easy to comprehend, yet despite its simplicity it is a complete description of the change process. There is no index, yet the bibliography is geared specifically to the practitioner. There are many references to quantitative research studies. The concluding chapter consists of a series of one-liners which summarize the points made throughout the monograph, which may be used as a framework for change plans."

COLLECTIONS OF READINGS ON THE CHANGE PROCESS

Abbott, Max C. and Lowell, John T. (editors). *Change Perspectives in Educational Administration.* Auburn, Alabama: Auburn University, 1965.

Abstract: From Havelock, *et al.*, *Major Works on Change in Education: An Annotated Bibliography and Subject Index*, Ann Arbor: Center for Research on Utilization of Scientific Knowledge, no date.

"Six papers are included which were given at a seminar on the change process held at Auburn University. The seminar dealt with: (1) identifying and defining of basic forces in American society that impinge upon the educational institution, (2) the analyzing of specific implications of these forces on the educational institution, (3) the discussing of different aspects of the change process itself."

Bennis, Warren G.; Benne, Kenneth D.; and Chin, Robert (editors). *The Planning of Change: Readings in the Applied Behavioral Sciences.* New York: Holt, Rinehart, and Winston, 1961.

According to the authors, in this volume an attempt has been made "to bring together some of the best current conceptualizations of different aspects of application and change process, and to tie these contributions together with extensive critical and theoretical introductions."

Most of the contributions to this volume are by social scientists of some sort and most of the papers are theoretical--thus, they are not related to any specific change problems.

The book is divided into four parts:

I. The Roots of Planned Change

II. Conceptual Tools for the Change Agent: Social Systems and Change Models

III. Dynamics of the Influence Process

IV. Programs and Technologies of Planned Change.

Bushnell, Don D.; Freeman, Robert A.; and Richland, Malcolm (editors). *Proceedings of the Conference on Implementation of Educational Innovations*. Santa Monica, California: System Development Corporation, 1964.

Abstract: From Havelock, Ron, *et al.*, *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices*. Ann Arbor: Center for Research on Utilization of Scientific Knowledge, October 1969.

"The SDC was awarded a U.S. Office of Education contract to conduct a traveling seminar in innovating school districts within various regions of the United States, and to conduct a post-seminar conference devoted to the problems of implementing tested innovations. An interdisciplinary team of 10 SDC educators, psychologists, and sociologists conducted a program of on-site visitation, for some 150 educators from state departments, colleges and universities, and public school districts. They visited well established centers of innovative practices in ongoing school programs in 15 school districts from four geographic regions in the country."

Center for the Advanced Study of Educational Administration (editors). *Change Processes in the Public Schools*. Eugene, Oregon: University of Oregon, 1964.

This publication is a report of a seminar conducted with public school officials by the Center for the Advanced Study of Educational Administration at the University of Oregon. The seminar had as its main objective the enhancement of the school officials' understanding of the planned change processes and of their skills in carrying out planned change. Contributors are:

Carlson, Richard O. "Barriers to Change in the Public Schools"

Miles, Matthew B. "Planned Change and Organizational Health: Figure and Ground"

Gallaher, Art, Jr. "Directed Change in Formal Organizations: the School System"

Rogers, Everett M. "What are Innovators Like?"

2

Pellegrin, Roland J. "The Place of Research in Planned Change."

Educational Leadership. "Innovation: Purpose and Effect." 25: January 1968.

The entire issue is devoted to the subject of innovation. Contributors include the following:

Leeper, Robert R. "Editorial: 'Most of the Change'"

Foster, Richard L. "The Search for Change"

Guba, Egon G. "Diffusion of Innovations"

Purdym, Ralph D. "The Public and Innovation"

Hair, Donald "The Road to Where?"

Keeley, Jean A. "Criteria for Innovations"

Hencley, Stephen P. "Innovation and School Policy"

Tuck, Russell, Jr. "Impact of Innovations."

Eidell, Terry L. and Kitchel, Joanne M. (editors). *Knowledge Production and Utilization in Educational Administration.* Eugene, Oregon: University Council for Educational Administration, and Center for the Advanced Study of Educational Administration, University of Oregon, 1968.

Abstract: From *Research in Education.* 4:29; April 1969. (ED 024 112) MF $0.50; HC $4.75.

"The seven papers contained in this monograph were presented at the Seventeenth UCEA Career Development Seminar held in Portland, Oregon, October, 1967. Some papers view the problems of applying new knowledge to practice quite generally in the context of the broader society while others focus more sharply on strategies for implementing the utilization of knowledge in the context of educational organizations. Launor F. Carter and Norman J. Boyan discuss the general question of knowledge production and utilization in education. Specific roles and techniques which need to be developed are outlined by Egon G. Guba, Ronald Havelock, and Sam D. Sieber. Richard Schmuck describes two training event models dealing with the social psychological aspect of transforming behavioral science knowledge into effective practice in educational administration. Finally, Keith

Goldhammer presents some thoughts on how preparatory programs should be revamped in light of the need for specialized administrators."

Goulet, Richard R. (editor). *Educational Change: The Reality and the Promise*. New York: Citation Press, 1968.

This is the report on the National Seminars on Innovation, held in Honolulu from July 2-23, 1967. The papers are divided into five sections: "Into the Future with our Changing Schools"; "Systematic and Effective Innovation"; "Creative Directions for Innovation by Government, Universities, and Industry"; and "State of Technology in Education and its Further Development and Implementation."

There are abstracts of each paper in the publication at the beginning of each section.

Hull, William L. and Stevenson, William W. (editors). *Change in Agricultural Education*. Proceedings of the Seventeenth Annual Southern Research Conference in Agricultural Education, July 30, 31, and August 1, at Oklahoma State University. Conducted by the Department of Agricultural Education in association with the Oklahoma Vocational Research Coordinating Unit. *Research in Education*. 5:120; May 1969. (ED 025 677). MF $0.75; HC $7.35.

This collection of papers is divided into five sections: The Theory of Change; Predicting Change; Research Trends; Research for Change; and Cooperation for Change.

Each section includes commentaries.

Journal of Business. 40: October 1967.

This issue contains a variety of articles on innovation and organization, including:

> Becker, Selwyn N. and Whisler, Thomas L. "The Innovative Organization: A Selective View of Current Theory and Research"
>
> Shepard, Herbert A. "Innovation-Resisting and Innovation-Producing Organizations"
>
> Knight, Kenneth E. "A Descriptive Model of the Intro-Firm Innovation Process"

Sapolsky, Harvey M. "Organizational Structure and Innovation"

Becker, Selwyn and Stafford, Frank. "Some Determinants of Organizational Success"

Evan, William M. and Black, Guy. "Innovations in Business Organizations: Some Factors Associated with Success or Failure of Staff Proposals"

Carroll, Jean. "A Note on Departmental Autonomy and Innovation in Medical Schools."

Leeper, Robert R. (editor). *Strategy for Curriculum Change.* Washington, D.C.: Association for Supervision and Curriculum Development, 1965.

This is a collection of papers from the ASCD Seminar on Strategy for Curriculum Change held in 1965. Contributors include Kimball Wiles, Ronald Lippitt, Herbert Lionberger, and Ralph Kimbrough. These papers try to answer the following questions:

1. What should be the source of change? Staff research, etc.?
2. Is there a strategy for curriculum change that is different for foundations? federal government? teacher? principal?
3. What are the critical points of decision in curriculum development?
4. Does recognizing many sources of change affect the strategy?
5. How important is it for teachers on a local staff to feel that they are a part of the decision to change the curriculum?
6. Can persons in superior roles in the administrative organization influence the behavior of teachers?
7. Is the strategy the same in an attempt to make major changes in the structure of the curriculum and the modifying of the instruction in a discipline?

8. Is the strategy the same when there is: (a) national but not local support for a change? (b) local but not national support for a change? (c) neither local nor national support by the public or mass media?

9. Is the strategy the same at different levels--the national? state? school? community?

Meierhenry, Wesley C. (editor). *Media and Educational Innovation: Authoritative Papers on Innovation by an Interdisciplinary Team.* University of Nebraska Press, 1964.

This collection of papers is a report of a "symposium on identifying techniques and principles for gaining acceptance of research results on use of newer media in education" held at the University of Nebraska in 1964. Contributors include Robert Chin, Art Gallaher, Paul Meadows, Wayman Crow, Herbert Lionberger, Gabriel Ofiesh, Truman Peirce, Matthew Miles, Henry Brickell, Jack Edling, W. C. Meierhenry, George Gerbner, Charles F. Hoban, C. Ray Carpenter, Kenneth D. Norberg, Robert W. Wagner, and Paul Wendt.

Miles, Matthew B. (editor). *Innovation in Education.* New York: Teachers College, Columbia University, 1964.

This is a collection of articles on educational innovation. After an introductory section by Miles, the book is divided into three sections: Case Studies; Research and Theory; and The American Educational System. A number of the articles appear elsewhere in other forms (e.g., Richard Carlson, "School Superintendents and Modern Math: A Social Structural Profile"; Henry M. Brickell, "State Organization for Educational Change: A Case Study and A Proposal") but most are original here. A final chapter by Miles attempts to make generalizations concerning educational innovation.

Miller, Richard I. (editor). *Perspectives on Educational Change.* New York: Appleton-Century-Crofts, 1967.

This collection of readings on educational change combines articles of many different types. There are articles of a "practical" sort (e.g., Henry M. Brickell, "The Role of Local School Systems in Change"; Glen Heathers, "Influencing Change at the Elementary Level"); case studies of innovation in particular school systems (e.g., Ruth Chadwick and Robert H. Anderson, "The School Reorganization Project in Newton, Massachusetts"; Evelyn Carswell, "How the Lulu Walker School

Came About"); and articles on the theoretical underpinnings of the change process (e.g., Robert Chin, "Some Ideas on Changing"; Ronald Lippitt and colleagues, "The Teacher as Innovator, Seeker, and Sharer of New Practices"). Richard I. Miller, the editor, includes an overview and observations and suggestions, and there is a final section listing general activities, programs, and studies in the area of the change process in education.

Miller, Richard I. (editor). *A Multidisciplinary Focus on Educational Change*. Lexington, Kentucky: College of Education, University of Kentucky, 1965.

This series of papers constitutes the report of the 1965 Midwest Regional Conference of Elementary Principals. Contributions include the following:

Miller, Richard. "Some Current Developments in Educational Change"

Chin, Robert. "Change and Human Relations"

Coughenour, C. M. "Change and Sociological Perspectives"

Lott, Albert J. "Change and Early Childhood Education"

Booth, David A. "Change and Political Realities"

Miller, Richard. "Needed Research and Development in the Process of Change."

A selected bibliography is included.

National Conference on Diffusion of Educational Ideas: Major Papers. Sponsored by the Research Coordinating Unit of the Vocational Education Division of the Michigan Department of Education, in cooperation with the U.S. Office of Education, the Department of Communication, and the Continuing Education Service at Michigan State University, East Lansing, Michigan, March 26-28, 1968. *Research in Education*. 6:123; June 1969. (ED 026 535). MF $0.75; HC $9.75.

The papers presented at the conference included the following:

Carlson, Richard O. "Summary and Critique of Educational Diffusion Research"

Lippitt, Ronald and Havelock, Ronald. "Needed Research on Research Utilization"

Rogers, Everett M. and Jain, Nemi C. "Needed Research on Diffusion within Educational Organizations"

Lin, Nan. "Innovative Methods for Studying Innovation in Education"

Miller, Richard I. "Implications for Practice from Research on Educational Change."

All these papers are abstracted elsewhere in this bibliography.

National Education Association Journal. "Special Feature on Innovation." 56:25-33; May 1967.

A very short section of this issue is devoted to innovation. Contributions to the section include:

Chesler, Mark and Fox, Robert. "Teacher-Peer Relations and Educational Change"

Mackenzie, Gordon N. "The Process of Innovation: Some Case Studies Selected by NEA Educational Services Staff Members"

Offcett, Bill; Bordeax, Bob; and Bordeax, Tom. "The Innovation Game"--a maze developed by the above, who are affiliated with the Montgomery County, Maryland Public Schools.

Strategies for Educational Change Newsletter. Ohio State University School of Education. The Newsletter is published six times a year, from October 1965 to April 1968.

Published by the Ohio State University School of Education and supported by the Ohio State University Development Fund, the Newsletter was an outgrowth of the Conference on Strategies for Educational Change, Washington, D.C., November 8-10, 1965.

Appearing six times a year, each issue discussed a different aspect of the change process, and most major issues in educational change are covered. Contributors range from Egon Guba to Everett Rogers. Some representative issues are:

"Regional Education Labs: Are They Here to Stay?" (April 1968)

"Dissemination: After Bangkok, What?" (January 1968)

"The Cooperative Project in Educational Development" (May 1966)

"Title III" (November 1967)

"The Innovation Dilemma" (December 1966)

Copies of individual issues may be obtained for $0.25 each from the School of Education at Ohio State. Inquiries should be addressed to: Michael H. Kean, 314 Oxley Hall, 1712 Neil Avenue, Columbus, Ohio 43210.

Theory into Practice. "Changing the School." 2: December 1963.

This is a collection of short articles on the process of educational change, including both theoretical statements and summaries of research findings. Contributors include:

Griffiths, Daniel E. "The Elementary School Principal and Change in the School System"

Rogers, Everett M. "What are Innovators Like?"

Willower, Donald J. "Barriers to Change in Educational Organizations"

Eicholz, Gerald C. "Why Do Teachers Reject Change?"

Chesler, Mark; Schmuck, Richard; and Lippitt, Ronald. "The Principals' Role in Facilitating Innovation."

All of these papers are abstracted in this bibliography.

Theory into Practice. "Planning for Educational Change." 5: February 1966.

The entire issue considers the subject of planned change in education. Following an introduction by Blanke and a discussion of the need for planned change by Bhola, the issue is divided into two major sections.

Section I discusses the Study of Change as a Concept: in Cultural Anthropology, Rural Sociology, Research Utilization, National Development and Education.

Section II considers the Effect of Planned Change: on the Classroom, on the Local School, on State Departments, National Agencies, and the Federal Government.

Watson, Goodwin (editor). *Concepts for Social Change*. Washington, D.C.: Cooperative Project in Educational Development, National Education Association, 1967.

The purpose of this collection of readings is to develop the core ideas about educational change that give direction to the Cooperative Project for Educational Development. COPED was a three-year project funded by the U.S. Office of Education for "the exploratory development of models of planned change in education" in about 25 school systems located in the metropolitan areas of New York, Boston, Chicago, and Detroit-Ann Arbor.

Contents include:

Buchanan, Paul. "The Concept of Organizational Development, or Self-Renewal as a Form of Planned Change"

Watson, Goodwin. "Resistance to Change"

Klein, Donald. "Some Notes on the Dynamics of Resistance to Change: The Defender Role"

Thelen, Herbert A. "Concepts for Collaborative Action-Inquiry"

Havelock, Ronald G. and Benne, Kenneth. "An Exploratory Analysis of Knowledge Utilization"

Lippitt, Ronald. "The Use of Social Research to Improve Social Practice"

Lake, Dale G. and Miles, Matthew. "Self-Renewal in School Systems: A Strategy for Planned Change."

Watson, Goodwin (editor). *Change in School Systems*. Washington, D.C.: Cooperative Project for Educational Development, National Education Association, 1967.

This book is intended as a companion volume to *Concepts for Social Change*. The papers presented here focus attention on the special properties and processes of the schools and strategies to test and develop the core ideas.

Contributions to this volume include:

Miles, Matthew B. "Some Properties of Schools as Social Systems"

Lippitt, Ronald. "Improving the Socialization Process"

Buchanan, Paul C. "Crucial Issues in Organizational Development"

Jung, Charles C.; Fox, Robert; and Lippitt, Ronald. "An Orientation and Strategy for Working on Problems of Change in School Systems"

Jung, Charles C. "The Trainer Change-Agent Roles within a School System"

Watson, Goodwin. "Toward a Conceptual Architecture of a Self-Renewing System."

BIBLIOGRAPHIES ON THE CHANGE PROCESS

Havelock, Ronald G.; Huber, Janet; and Zimmermann, Shaindel (editors). *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices.* Ann Arbor: Center for Research on Utilization of Scientific Knowledge, University of Michigan, October 1969.

This is an annotated bibliography including material on the following topics:

"1. General coverage of a range of topics relevant to educational change.

2. In book form.

3. Published and available in education libraries, book stores, or by ordering from indicated sources."

Excluded are empirical studies and reports on specific research projects unless they cover a range of relevant topics, offer both research findings and implications for practice, and can be obtained as separate monographs.

Kurland, Norman D. and Miller, Richard I. (editors). *Selected and Annotated Bibliography on the Processes of Change.* Lexington, Kentucky, University of Kentucky, 1966.

The contents of this annotated bibliography are organized according to subject matter: Anthropology, Education, Industry and Technology, International Development, Medical Science, Political Science, Psychology, Rural Sociology, Sociology, Periodicals on Change, Bibliographies, and General Materials. Each section is further subdivided into Books and Booklets, Articles, and Unpublished Materials. The bibliography is 41 pages long; most annotations are very complete.

Rogers, Everett M. (editor). *Bibliography on the Diffusion of Innovations.* East Lansing, Michigan: Michigan State University, Department of Communications, July 1967.

Published by the Diffusion Documents Center at Michigan State University, this bibliography is part of a series of Diffusion Documents Reports.

Publications are classified into two types: (a) those reporting empirical results (about 78 percent) and (b) other diffusion research publications. For each item, the following information is provided: author's name, title of publication, book or periodical, the author's diffusion research tradition, the publication's identification number in the Diffusion Documents Center, and whether the publication is present or absent from the Center.

Nine hundred forty-one publications are included.

Rogers, Everett M. (editor). *Supplement to Bibliography on the Diffusion of Innovations*. East Lansing, Michigan: Michigan State University, Department of Communications, September 1968.

This supplement includes new publications from July 1967 to September 1968. Seventy-five non-empirical and 184 empirical publications are indexed.

Spitzer, Lillian K. (editor). *A Bibliography on the Process of Change*. Melbourne, Florida: Institute for Development of Educational Activities, Inc., 1968.

This briefly annotated bibliography on the process of change has been arranged in two parts. The first part, which is the most extensive, consists of books and pamphlets. The second part lists magazine articles.

Stuart, Michael and Dudley, Charles (editors). *Bibliography on Organization and Innovation*. Eugene, Oregon: Center for the Advanced Study of Educational Innovation, University of Oregon, 1967.

Articles are divided into five main categories:

A. Social Structure, Social Psychology, and Social Organization

B. Social Structure, Social Psychology, and Social Organization in Education

C. Innovation and Change in Social Structure, Social Psychology, and Social Organization

D. Innovation and Change in Education

E. Bibliographies.

The bibliography has 96 pages.

Voos, Henry (editor). *Organizational Communication: A Bibliography*. New Brunswick, New Jersey: Rutgers University Press, 1967.

This is an annotated bibliography of literature in the area of organizational communication, covering primarily the social and technological sciences. In addition to 315 references, an introductory section discusses trends in the literature and outlines the chief findings in the publications reviewed in the book under the following areas: General, Decision-Making, Upward Communication, Downward Communication, Persuasion, Horizontal Communication, Feedback, Cognitive Dissonance, and Networks. The book is indexed both by subject and author.

WORKS FROM DISSERTATION ABSTRACTS

Addis, Winston C. "An Analysis of the Perceptions of Principals of High or Low Innovative Schools." *Dissertation Abstracts*. 29:1696-A. University of Iowa, 1968.

The problem of this study was to isolate and analyze differences between high-innovative and low-innovative principals' perceptions of selected concepts. Secondly, the variables age and tenure in present position were studied for their effect on the same perceptions.

Bickert, Roderick N. "Selected Organizational Values and Characteristics of Innovative and Non-Innovative School Systems." *Dissertation Abstract*. 28:71-A. University of Iowa, 1967.

This study was concerned with selected values and characteristics in innovative as opposed to non-innovative school systems. The values and characteristics were organized and analyzed under three major classifications:

I. The Instructional Program

II. Faculty-Administration-Board Relations

III. Motivational Aspects.

The central problem was to determine whether these values and characteristics were significantly different for innovative schools as opposed to non-innovative schools.

The secondary or sub-problem was to determine whether significant differences exist in "across group" comparisons for those who responded to the evaluating instrument.

In attempting to solve the central and secondary problems, hypotheses were developed to test whether or not significant differences in responses would be obtained between innovative and non-innovative school systems for each of the major classifications. A second set of hypotheses were developed to test for possible significant differences in "across group" comparisons for the groups responding to the evaluation instrument.

Bishop, Lloyd K. "Bureaucracy to the Adoption of Educational Innovation." *Dissertation Abstracts*. 28:386-A. University Center, 1966.

Abstract not available.

Breivogel, William F. "The Relationship of Selected Variables to the Introduction of Educational Innovations in New Jersey Public School Districts." *Dissertation Abstracts*. 28:1643-A. Rutgers, 1967.

Does a significant relationship exist between selected variables and the introduction of educational innovations in New Jersey public school districts?

Chesler, Mark A. "Social Structures and Innovation in Elementary Schools." *Dissertation Abstracts*. 28:293-A. University of Michigan, 1966.

The purpose of this study is to inquire into the personal and social conditions affecting innovative classroom teaching in public elementary schools. An innovation is defined broadly as a new or unusual teaching practice designed to improve student mental health and learning. Teacher demographic variables, feelings about professional autonomy and influence, and attitudes towards peers are among the personal forces considered. In addition, structural aspects of teacher peer-relations, attitudes toward the principal, and aspects of the principal's values and behavior are studied.

Childs, John W. "A Study of the Belief Systems of Administrators and Teachers in Innovative and Non-Innovative School Systems." *Dissertation Abstract*. 27:622-A. Michigan State University, 1965.

The purpose of the study was to collect and examine empirical evidence relevant to the idea that there was a relationship between the nature of the belief systems of individuals in school districts and the adoption of new educational practices. Previous completed research dealing with belief systems and innovation had not dealt with an educator population. However, open belief systems had been related to the adoption of new farm practices in a study of Iowa farmers.

Currie, Craig H. "Secondary School Principals Assessment of the Importance of Personal and Situational Factors in the Adoption of Innovations." *Dissertation Abstracts*. 27:624-A. University of Oregon, 1966.

The purpose of this study was twofold: first, to determine the status in Oregon of seven practices advocated by the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School. Coupled with this purpose was an assessment of the relationship between the principal's innovativeness and the influence of such mediating variables as size of school, district classification, percentage of graduates enrolled in higher education and amount spent per child excluding capital outlay and transportation costs.

Second, hypotheses were set up so that no significant difference existed in the percentages considering each factor important between the adopters and non-adopters with both groups of high school principals having been randomly drawn from the same population.

Eibler, Herbert J. "A Comparison of Relationships Between Certain Aspects of Characteristics of the Structure of High School Faculty and the Amount of Curriculum Innovation." *Dissertation Abstract*. 26:7111. University of Michigan, 1965.

The purpose of this study was to determine if relationships existed between certain characteristics or aspects of the structure of the high school faculty and the amount of curriculum innovation. From a group of 26 high schools in the Detroit Metropolitan Area--selected on the basis of faculty size, principal's tenure, accreditation, and student enrollment--five low innovating and five high innovating schools were selected to participate in the investigation. Replies by principals to a State Department of Public Instruction questionnaire were used to differentiate the high and low innovating schools. Fourteen characteristics or aspects of the structure of the faculty were incorporated in the questionnaire. They were Contact, Rules-Procedures-Policies, Problems-Routines, Decisions, Planning, Coordination, Change, Administration, Utilization, Communication, Cohesion, Purpose, Morale, and Difficulties. Differences were ascertained by the Chi-square test for significance.

Elliott, Arthur Howard. "An Investigation of School Organization Variables and Their Relation to the Principal's Acceptivity to Innovation: An Exploratory Study." *Dissertation Abstracts*. 28:899-A. University of California at Berkeley, 1967.

The purpose of the study was to examine certain school organizational variables and staff characteristics in order to determine how these relate to educational innovation. The specific variables involved were: (1) elements of "organizational climate," (2) characteristics of the professional staff, and (3) principals' self-expectations to support innovation. The relationships between these variables were analyzed in an attempt to recognize organizational conditions which allow educational institutions to adapt to the changing needs of society.

The research sample consisted of 132 schools in the province of Alberta, Canada; survey data were obtained from both teachers and principals.

George, Philip R. "A Study of Select Innovative Programs and Services Adopted by Public High Schools in the State of Idaho." *Dissertation Abstracts*. 29:1706-A. University of Idaho, 1968.

This research has concerned itself with an investigation of innovation and change at the local school level. The focal point of research has been twofold: (1) to survey the public high schools in the State of Idaho which have adopted certain selected innovative programs and services, and (2) to analyze and compare school size and number of innovations adopted.

Hardenbrok, Robert Francis. "Introduction of Processes of Innovation in Selected Schools in Santa Barbara County." *Dissertation Abstracts*. 28:2896-A. University of Southern California, 1967.

It was the purpose of this study to identify a number of innovations in the schools of Santa Barbara County, to identify the pattern of development for selected innovations, to determine the relationship or lack of relationship between the innovative pattern and the scope of influence of particular innovations, and to formulate certain conclusions which could be used to guide the introduction of subsequent innovations.

Hawkins, Wilber Dale. "Some Facts Which Contribute to Successful Educational Innovation." *Dissertation Abstracts*. 28:4410-A. University of Southern California, 1968.

The purpose of this study was to identify some of the factors which contribute to successful educational innovation. By isolating those that can be shown to be associated with successful innovation, it was hoped to be able to formulate a valid basis for planning and implementing programs of educational change.

Hughes, Larry W. "Organizational Climate Found in Central Administrative Offices of Selected Highly Innovative and Non-Innovative School Districts in Ohio." *Dissertation Abstracts*. 27:73-A. 1965.

The general objective of this research was to examine central office administrative team behavior in highly innovative and non-innovative school districts. The major purposes were to describe the "organizational climate" in the two types of districts and to explore the apparent significance of "climate" as it would seem to relate to innovativeness.

Jacobs, Jan W. "Leadership, Size and Wealth as Related to Curricular Innovations in Junior High School." *Dissertation Abstract*. 27:354-A. University of Michigan, 1965.

The purpose of this study was to measure the degree to which educational productivity, as indicated by the number of curricular innovations in selected Michigan public junior high schools, was associated with such factors in the school as leadership, size, and wealth. The hypotheses of this study were: (1) the principals from the schools with the largest number of curricular innovations display a different type of leadership, as perceived by the teachers and as measured on the Leader Behavior Description Questionnaire--Form XII, when compared with the leadership behavior of the principals of schools with the smallest number of innovations; (2) there is a positive relationship between the number of innovations and the student enrollment of the junior high school; (3) there is a positive relationship between the number of innovations and the teacher-pupil ratio of the junior high school; (4) there is a positive relationship between the number of innovations and the total number of students in the school district; (5) there is a positive relationship between the number of innovations and the total number of teachers in the school district; (6) there is a positive relationship between the number of innovations and the state equalized valuation per membership pupil; and (7) there is a positive relationship between the number and the average teacher's salary in the school district.

Jenks, Houston C. "A Study of Innovation Adoption by Teachers from a Consortium of Schools." *Dissertation Abstracts.* 29:1475-A. University of Texas at Austin, 1968.

This study investigated the ratio of adoption of the process approach (innovation) to teaching elementary science by teachers undergoing in-service training. A conceptual framework purporting to account for innovation adoption by individuals in a social system was adapted from Everett Rogers' model.

The model had three divisions: antecedents, process, and results. Antecedents are situational factors present prior to introduction of an innovation. The categories of predictor variables related to the antecedents were: in-service teacher's characteristics, peer relationships, and formal organizational characteristics.

Jenkins, John M. "A Study of the Characteristics Associated with Innovative Behavior in Teachers." *Dissertation Abstract.* 28:903-A. University of Miami, 1967.

The purpose of this project was to investigate the characteristics associated with innovative behavior in teachers and to compare the results of this inquiry with the reported findings of research in other professions and occupations. The exploratory nature of this study made possible the examination of differences between innovative and non-innovative teachers, and the generalizability of the characteristics associated with other fields to innovative behavior in teachers. The following questions were treated: (1) Will a selected group of secondary school teachers identified as innovative evidence different intellectual and personality characteristics when compared with a group of secondary teachers identified as non-innovative? (2) Will the characteristics differentiating creative and noncreative persons in other occupational fields hold true in differentiating innovative from non-innovative teachers at the secondary school level?

Klingenberg, Allen J. "A Study of Selected Administrative Behaviors Among Administrators from Innovative and Non-Innovative Public School Districts." *Dissertation Abstracts.* 27:2788-A. Michigan State University, 1966.

The purpose of this study was to collect and analyze empirical evidence concerning differences between public school administrators from innovative and non-innovative school districts on selected administrative behavioral dimensions. This study developed from the descriptions of innovative and non-innovative school administrators found in the educational and general innovation literature.

Knedlik, Stanley M. "The Effect of Administrative Succession Pattern Upon Educational Innovation in Selected Secondary Schools." *Dissertation Abstracts*. 28:4415-A. New York University, 1967.

The purpose of this study was to examine the effect which the organizational phenomenon of administrative succession pattern has upon the frequency and extent of adoption of educational innovation in public secondary schools. The general systems construct provided the theoretical framework for explaining the relationship between variables. Four succession patterns emerged from combining principals with their superordinates based on whether each was an outsider or insider to the school system.

Kohl, J. W. "Adoption Stages and Perceptions of Characteristics of Educational Innovations." *Dissertation Abstracts*. 27:3666-A. University of Oregon, 1966.

The purpose of this study was twofold. The first was to determine the adoption status of seven educational innovations in relation to selected independent variables, primarily to test prior conclusions regarding the predictability of those variables. The second was to identify, relate and evaluate school superintendents' perceptions of the "characteristics" of innovations to each "stage" of the adoption process.

Kurzler, William J. "A Study of Factors That Facilitate and Inhibit Instructional Change as Perceived by Principals." *Dissertation Abstracts*. 29:1716-A. University of Iowa, 1968.

The purpose of this study was to determine what factors promote and retard instructional change as perceived by building principals in a random sample of the high- and low-innovating accredited secondary schools in the nation.

LaPlant, James C. "School District Innovativeness and Expectations for the School Board Role." *Dissertation Abstracts*. 28:386-A. University Center, 1966.

The purpose of this investigation was to examine the relationships of the degree of consensus of expectations for the school board role within and between groups of citizens, teachers, elected officials, and school board members to the extent of innovativeness exhibited in school districts. Measures of innovativeness used were the degree of innovativeness, measured by the number of innovations adopted; the earliness of adoption, determined by the date of adoption; and the rate of diffusion of innovations within a district after the innovations were adopted.

Lawrence, Clifford J. "Personality Characteristics of School Superintendents Who Implement Innovation in Public Schools." *Dissertation Abstracts*. 28:1397-A. Utah State University, 1968.

The purpose of this study was to investigate the relationship between personality characteristics of school superintendents and their willingness to accept innovation in education. Determination of this relationship was made by examining the correlation of personality factors as determined by Cattell's 16 P.F. Questionnaire with the superintendents' score on an innovation scale. After placing all of the superintendents into two extreme groups, high and low, on the basis of their innovation scores, the differences between the personality characteristics of the two groups were determined. In addition, the degree of innovativeness of each superintendent was compared with the following descriptive variables: (a) age, (b) size of school district in which he was employed, and (c) the number of years during which he had held his current position.

Mims, Crawford J. "Attitudes of Arkansas School Administrators Toward the Adoption or Rejection of Innovations in Education." *Dissertation Abstracts*. 29:1369-A. University of Arkansas, 1968.

This study was undertaken to determine if the attitudes of superintendents, supervisors, and principals of the public secondary schools of Arkansas were favorable, unfavorable, or indifferent toward 20 selected innovations in educational practices, and if there was a significant difference between the administrators' attitudes. The study was also undertaken to determine if the administrators' attitudes were influenced by seven independent variables: age, race, educational level, last attendance at college, years of experience as a school administrator, size of school district, and expenditure per pupil. To extent of adoption

and some obstacles to and trends toward adoption the innovations were investigated.

Overly, Donald E. "Comparative Analysis of North Central Accredited Indiana Secondary Schools in Relation to Educational Innovations." *Dissertation Abstracts*. 29:1727-A. Indiana University, 1968.

This study sought to determine what selected innovations were abandoned or not adopted and those that were adopted in relation to enrollment, per pupil expenditure, geographical location, geographical district, and assessed calculation per pupil. Further, the study sought to determine the reasons for abandonment or non-adoption.

Peach, Samuel Wesley. "Relationships Between Certain Factors in the Role of The School Principal and the Adoption of Innovative Instructional Practices." *Dissertation Abstracts*. 29:104-A. University of Washington, 1967.

The purpose of this study was to explore certain hypothesized relationships between the role of the school principal and the implementation of planned change in the instructional program. Major emphases of the current study were its focus upon the impact of the principalship role, the reporting of change at the school level by classroom teachers, and the exploration of relationships associated with viewing school organizations as social systems.

Peterman, Lloyd E. "Relationships of In-Service Education to the Innovativeness of Classroom Teachers in Selected Public Secondary Schools in Michigan." *Dissertation Abstracts*. 27:2799-A. University of Michigan, 1966.

The purpose is to study the relationship of the participation of teachers in in-service education to the innovativeness of the classroom teachers. It is important to determine whether the in-service education is effective in fostering innovations.

Peterson, Irving M. "Relationships Between School Superintendents Personality Orientations, Perceived Situational Pressure and Innovativeness." *Dissertation Abstracts*. 29:2072-A. Rutgers, 1968.

This study sought to investigate the relationships among three characteristics of the principal gatekeepers for major

educational innovations in secondary school science at the local level; school superintendents' innovativeness, dogmatism, and perceptions of situational pressures.

Preising, Paul Philip. "The Relationship of Staff Tenure and Administrative Succession to Structural Innovation." *Dissertation Abstracts*. 29:447-A. Stanford University, 1968.

The central purpose of this investigation was to determine whether schools in different statuses of innovation also differed significantly on each of the following variables: length of tenure of staff, source of recruitment of administrators, size of school, size of district, and expenditure per pupil.

Ramer, Burton. "The Relationship of Belief Systems and Personal Characteristics of Chief School Administrators and Attitudes Toward Educational Innovation." *Dissertation Abstracts*. 29:782-A. State University of New York at Buffalo, 1968.

The purpose of this study was to analyze the relationships among the belief systems and personal characteristics of chief school administrators and attitudes toward educational innovation.

Richland, Malcolm. "A Study to Refine an Operational Index of Innovation for School Administrators." *Dissertation Abstracts*. 29:1732-A. University of Southern California, 1968.

It was the purpose of this study: (1) to identify the factors that influence school districts; attitude toward trial and acceptance of new practices in the field of education; (2) once identified, to determine if the factors affecting change can be used to establish an index of change that would be operationally useful to the school administrator.

Sargent, Harold Ross. "A Test of Motivational Appeals Judged Effective by Chief School Administrators to Induce Teacher Acceptance of Educational Innovation." *Dissertation Abstract*. 26:6484. Pennsylvania State University, 1965.

The purpose of this study was to determine if school administrators defined as high innovators differed in their judgments from those defined as low innovators concerning the effectiveness of motivational appeals used when achieving planned change within school systems. Motivational appeals were separated into three groups based on basic human needs. These categories were Reward and Punishment, Rational, and Catharsis. The basic assumption of the research was that high innovators would differ from low innovators on how effective they considered certain appeals causing them to employ and stress certain appeals and place less emphasis on others.

Schulman, High S. "The Initiation of Change by Principals in the Elementary Schools of Nassau and Suffolk Counties, New York." *Dissertation Abstracts.* 29:785-A. New York University, 1968.

The purpose of this study was to determine the number of changes initiated by elementary school principals in their schools and the relationships between the number of changes and certain selected variables. The research design was developed within the framework of a conceptualization of administrative change which uses systems theory as a model. The elementary school is viewed as a system; the administration of the school is a subsystem. The total interacting environment of the system constitutes its supra-system.

Spencer, Eugene Norman. "Variables Affecting the Adoption Rates of Educational Innovations in Selected School Districts of Oakland County, Michigan." *Dissertation Abstracts.* 28:2965-A. Wayne State University, 1967.

This study was made to determine the relationships among 54 independent variables (characteristics of the superintendent of schools, school district-community, school district personnel and school district economic data) describing each local school district and the local district's degree of innovativeness (as measured with respect to the adoption of 52 innovations) from 1954 through 1965 in Oakland County, Michigan. Null hypotheses stated were: that the characteristics of local school districts (54 independent variables) do not account for any significant differences in the innovativeness (dependent variable) of local school districts.

Another objective was to evaluate the effects of the Oakland County Intermediate School Office with respect to the introduction of new practices in local districts within its constituency. Each innovation was evaluated in terms of its characteristics. The forces of thrust which caused adoption of individual practices in each district also were determined.

Van Alfen, Curtis Nicholas. "A Study to Develop an Instrument Measuring the Perception of Educators and Teachers as it Relates to Innovative, Transitional or Traditional Educational Environments." *Dissertation Abstracts*. 28:1255-A. University of Utah, 1967.

This study was designed to develop an instrument which would measure the perceptions of an individual or group as they relate to "new or innovated" educational environments as well as "old or traditional" educational environments. An initial use of the instrument was made to determine the most discriminating items of those developed.

Innovative environments were defined as those that create conditions that allow innovative individuals to operate in a facilitating setting. The innovative environment not only tolerates its deviants and other forms of originality, but encourages and rewards them.

Traditional environments are characterized by an atmosphere which fails to establish institutionalized procedures for rewarding originality. It is an environment characterized by acceptance of the "tried and true" with a "tight ship" ethos.

Weis, John Philip. "Awareness of Change: A Study of Factors Related to Knowledge of Educational Innovation." *Dissertation Abstracts*. 28:4725-A. Yale University, 1967.

This research is concerned with the awareness of educational change. The conception of awareness presented here stresses its importance as the first stage of the change process, and the one on which all subsequent action for or against innovation is built. The ideas concerning awareness were drawn both from past theory and research, and from the understanding of the social dynamics of the community which served as the research setting. From this community, called Changeville, a sample of 140 mothers with children in the tenth grade was drawn, and a questionnaire administered to each. The relationships that were tested related position in the social structure and values to the awareness of educational change. The measure of the mother's position in the social structure was ascertained through her own educational level, while her educational aspirations for her children were the indicator of the value she placed on education.

Wygal, Benjamin R. "Personal Characteristics and Situational Perceptions of Junior College Instructors as Related to

Innovativeness." *Dissertation Abstracts.* 27:3283-A. University of Texas, 1966.

The major purpose of this study was to identify and analyze those personal characteristics and situational perceptions which may differentiate junior college teachers rated as innovators from junior college teachers rated as traditionalists. Inherent in this purpose was that of adapting and testing certain portions of Everett M. Rogers' model of the adoption and diffusion of innovations.

BIBLIOGRAPHY: SELECTED WORKS RELEVANT TO THE CHANGE PROCESS IN EDUCATION

BIBLIOGRAPHY: SELECTED WORKS RELEVANT TO THE CHANGE PROCESS IN EDUCATION

Abbott, Max and Lowell, John T. (editors). *Change Perspectives in Educational Administration*. Auburn, Alabama: Auburn University, 1965. (Collection of Readings)

Addis, Winston. "An Analysis of the Perceptions of Principals of High or Low Innovative Schools." *Dissertation Abstracts*. 29:1696-A. University of Iowa, 1968. (Dissertation Abstracts)

Argyris, Chris. *Organization and Innovation*. Homewood, Illinois: Richard D. Irwin, Inc., 1965. (Empirical)

Averill, Thomas B. "Educational Participation and Innovativeness." *Research in Education* (ERIC). 3:15. June 1968. (Empirical)

Becker, Selwyn W. and Stafford, Frank. "Some Determinants of Organizational Success." *Journal of Business*. 40:511-18. October 1967. (Empirical)

Becker, Selwyn W. and Whisler, Thomas L. "The Innovative Organization: A Selective View of Current Theory and Research." *Journal of Business*. 40:462-69. October 1967. (Theoretical or Non-Empirical)

Bennis, Warren G.; Benne, Kenneth D.; and Chin, Robert (editors). *The Planning of Change: Readings in the Applied Behavioral Sciences*. New York: Holt, Rinehart and Winston, 1961. (Collection)

Bhola, Harbans Singh. "The Configurational Theory of Innovation Diffusion." Unpublished paper, Ohio State University School of Education, 1965. (Theoretical or Non-Empirical)

Bhola, Harbans Singh. "Innovation Research and Theory." Paper presented at Conference of Strategies for Educational Change, Washington, D.C. November 8-10, 1965. (Theoretical or Non-Empirical)

Bickert, Roderick N. "Selected Organizational Values and Characteristics of Innovative and non-Innovative School Systems."

Dissertation Abstracts. 28:71-A. University of Iowa, 1967. (Dissertation Abstracts)

Bishop, Lloyd K. "Bureaucracy to the Adoption of Educational Innovation." *Dissertation Abstracts*. 28:386-A. Claremont Graduate School, 1966. (Dissertation Abstracts)

Breivogel, William F. "The Relationship of Selected Variables to the Introduction of Educational Innovations in New Jersey Public School Districts." *Dissertation Abstracts*. 28: 1643-A. Rutgers, 1967. (Dissertation Abstracts)

Brickell, Henry M. *Organizing New York State for Educational Change*. Albany, New York: New York State Department of Education. December 1961. (Theoretical or Non-Empirical)

Bushnell, Don D.; Freeman, Robert A.; and Richland, Malcolm. *Proceedings of the Conference on Implementation of Educational Innovations*. Santa Monica, California: System Development Corporation, 1964. (Collection)

Campbell, Rex R. "A Suggested Paradigm of the Individual Adoption Process." *Rural Sociology*. 31:458-66. December 1966. (Theoretical or Non-Empirical)

Cancian, Frank. "Stratification and Risk-Taking: A Theory Tested on Agricultural Innovation." *American Sociological Review*. 32:912-27. December 1967. (Empirical)

Carlson, Richard O. *Adoption of Educational Innovations*. Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965. (Empirical)

Carlson, Richard O. "Summary and Critique of Educational Diffusion Research." Paper presented at the National Conference on the Diffusion of Educational Ideas. Michigan State University, East Lansing, Michigan. March 26-28, 1968. (Theoretical or Non-Empirical)

Carroll, Jean. "A Note on Departmental Autonomy and Innovation in Medical Schools." *Journal of Business*. 40:531-34. October 1967. (Empirical)

Cawelti, Gordon. "Innovative Practices in High Schools: Who Does What--Why--How?" *Nations Schools*. 79:56-88. April 1967. (Empirical)

Center for the Advanced Study of Educational Administration. *Change Processes in the Public Schools*. Eugene, Oregon: University of Oregon, 1964. (Collection)

Chesler, Mark; Schmuck, Richard; and Lippitt, Ronald. "The Principal's Role in Facilitating Innovation." *Theory into Practice*. 2: December 1963. (Empirical)

Chesler, Mark. "Social Structures and Innovation in Elementary Schools." *Dissertation Abstracts*. 28:293-A. (Dissertation Abstracts)

Childs, John W. "A Study of the Belief Systems of Administrators and Teachers in Innovative and Non-Innovative School Systems." *Dissertation Abstracts*. 27:622-A. Michigan State University, 1965. (Dissertation Abstracts)

Christiansen, James E. and Taylor, Robert E. "The Adoption of Educational Innovations Among Teachers of Vocational Agriculture: A Project of a Ph.D. Dissertation." *Research in Education* (ERIC). 3:134. July 1968. (Empirical)

Clark, David L. and Guba, Egon G. "Effecting Change in Institutions of Higher Education." UCEA International Inter-Visitation Program. October 1966. (Theoretical or Non-Empirical)

Clark, David L. and Guba, Egon G. "An Examination of Potential Change Roles in Education." Paper presented at the Seminar on Innovation in Planning School Curricula, Airelhouse, Virginia. October 2-4, 1965. (Theoretical or Non-Empirical)

Coleman, James S.; Katz, Elihu; and Menzel, Herbert. *Medical Innovation: A Diffusion Study*. New York: Bobbs-Merrill, 1966. (Empirical)

Crain, Robert L. "Fluoridation: The Diffusion of an Innovation Among Cities." *Social Forces*. 44:467-75. 1966. (Empirical)

Crain, Robert L.; Katz, Elihu; and Rosenthal, Donald B. *The Politics of Community Conflict: The Fluoridation Decision*. New York: Bobbs-Merrill, 1969. (Empirical)

Currie, Craig H. "Secondary School Principals Assessment of the Importance of Personal and Situational Factors in the Adoption of Innovations." *Dissertation Abstracts*. 27: 624-A. University of Oregon, 1966. (Dissertation Abstracts)

Educational Leadership. 25: entire issue. "Innovation: Purpose and Effect." January 1968. (Empirical)

Eibler, Herbert J. "A Comparison of Relationships between Certain Aspects of Characteristics of the Structure of High School

Faculty and the Amount of Curriculum Innovation." *Dissertation Abstracts*. 26:7111. University of Michigan, 1965. (Dissertation Abstracts)

Eicholz, Gerald C. "Why Do Teachers Reject Change?" *Theory into Practice*. 2: December 1963. (Empirical)

Eidell, Terry L. and Kitchel, Joanne M. (editors). *Knowledge Production and Utilization in Educational Administration*. Eugene, Oregon: University Council for Educational Administration, and Center for the Advanced Study of Educational Administration, University of Oregon, 1968. (Collection)

Elliott, Arthur Howard. "An Investigation of School Organization Variables and their Relationship to the Principal's Acceptivity to Innovation: An Exploratory Study." *Dissertation Abstracts*. 28:899-A. University of California at Berkeley, 1967. (Dissertation Abstracts)

Evan, William and Black, Guy. "Innovation in Business Organizations: Some Factors Associated with Success or Failure of Staff Proposals." *Journal of Business*. 40:519-30. October 1967. (Empirical)

Evans, Richard I. in collaboration with Leppman, Peter K. *Resistance to Innovation in Higher Education: A Social Psychological Investigation Focused on Television and the Establishment*. San Francisco: Josey Bros., Inc., 1967. (Empirical)

Finley, James. "Farm Practice Adoption: A Predictive Model." *Rural Sociology*. 33:5-18. March 1968. (Theoretical or Non-Empirical)

Fliegel, Frederick C. and Kivlin, Joseph A. "Attributes of Innovations as Factors in Diffusion." *American Journal of Sociology*. 72:235-48. 1966. (Empirical)

George, Philip R. "A Study of Select Innovative Programs and Services Adopted by Public High Schools in the State of Idaho." *Dissertation Abstracts*. 29:1706-A. University of Idaho, 1968. (Dissertation Abstracts)

Goulet, Richard R. (editor). *Educational Change: The Reality and the Promise*. New York: Citation Press, 1968. (Collection)

Griffiths, Daniel E. "Administrative Theory and Change in Organizations." in Miles, Matthew B. (editor). *Innovation in Education*. New York: Teachers' College, Columbia University, 1964. (Theoretical or Non-Empirical)

Griffiths, Daniel E. "The Elementary School Principal and Change in the School System." *Theory into Practice.* 2: December 1963. (Empirical)

Guba, Egon G. "Diffusion of Innovations." *Educational Leadership.* 25:292-95. January 1968. (Theoretical or Non-Empirical)

Guba, Egon G. "Methodological Strategies for Educational Change." Paper presented at the Conference on Strategies for Educational Change. Washington, D.C. November 8-10, 1965. (Theoretical or non-Empirical)

Guba, Egon G. "The Process of Educational Innovation." in Goulet, Richard R. (editor). *Educational Change: The Reality and the Promise.* New York: Citation Press, 1968. (Theoretical or Non-Empirical)

Haber, Ralph Norman. "The Spread of an Innovation: High School Language Laboratories." *Journal of Experimental Education.* 31:359-69. Summer 1963. (Empirical)

Hardenbrok, Robert Francis. "Identification of Processes of Innovation in Selected Schools in Santa Barbara County." *Dissertation Abstracts.* 28:2896-A. University of Southern California, 1967. (Dissertation Abstracts)

Havelock, Ronald G. and Benne, Kenneth D. "An Exploratory Study of Knowledge Utilization." in Watson, Goodwin (editor). *Concepts for Social Change.* Washington, D.C.: Cooperative Project for Educational Development, National Education Association, 1967. (Theoretical or Non-Empirical)

Havelock, Ronald G.; Huber, Janet C.; and Zimmermann, Shaindel (editors). *The Knowledge Linker's Handbook.* Ann Arbor, Michigan: Center for Research on the Utilization of Scientific Knowledge, The University of Michigan. Should be available in later part of 1969 from CRUSK or through ERIC system. Being written under contract with USOE Research Utilization Branch. (Theoretical or Non-Empirical)

Havelock, Ronald G.; Huber, Janet C.; and Zimmermann, Shaindel (editors). *Major Works on Change in Education: An Annotated Bibliography With Author and Subject Indices.* Ann Arbor: Center for Research on Utilization of Scientific Knowledge, October 1969. (Bibliography)

Havelock, Ronald G. in collaboration with Guskin, Alan. *Planning for Innovation through the Dissemination and Utilization of Knowledge.* Ann Arbor, Michigan: Center for Research on the Utilization of Scientific Knowledge, The University of

Michigan. Under contract to USOE Research Utilization Branch; available through ERIC in later part of 1969. (Theoretical or Non-Empirical)

Hawkins, Wilbur Dale. "Some Facts Which Contribute to Successful Educational Innovation." *Dissertation Abstracts*. 28: 4410-A. University of Southern California, 1968. (Dissertation Abstracts)

Hughes, Larry W. "Organizational Climate Found in Central Administrative Offices of Selected Highly Innovative and Non-Innovative School Districts in Ohio." *Dissertation Abstracts*. 27:73-A. (Dissertation Abstracts)

Hüll, William L. and Stevenson, William W. (editors). *Change in Agricultural Education*. Proceedings of the Seventeenth Annual Southern Research Conference in Agricultural Education, July 30, 31, and August 1, at Oklahoma State University. Conducted by the Department of Agricultural Education in association with the Oklahoma Vocational Research Coordinating Unit. (Collection)

Jacobs, Jan W. "Leadership, Size and Wealth as Related to Curricular Innovations in Junior High School." *Dissertation Abstracts*. 27:354-A. University of Michigan, 1965. (Dissertation Abstracts)

Jenks, Houston C. "A Study of Innovation Adoption by Teachers from a Consortium of Schools." *Dissertation Abstracts*. 29:1475-A. University of Texas at Austin, 1968. (Dissertation Abstracts)

Jenkins, John M. "A Study of the Characteristics Associated with Innovative Behavior in Teachers." *Dissertation Abstracts*. 28:903-A. University of Miami, 1967. (Dissertation Abstracts)

Johnson, Cecil. "The Identification of Teacher Opinion Leaders: An Element in a Change Strategy for Agricultural Education." Ph.D. Dissertation. Ohio State University, 1968. (Empirical)

Journal of Business. 40: entire issue. October 1967. (Empirical)

Klingenberg, Allen J. "A Study of Selected Administrative Behaviors among Administrators from Innovative and Non-Innovative Public School Districts." *Dissertation Abstracts*. 27:2788-A. Michigan State University, 1966. (Dissertation Abstracts)

Knedlik, Stanley M. "The Effect of Administrative Succession Patterns upon Educational Innovation in Selected Secondary Schools." *Dissertation Abstracts*. 28:4415-A. New York University, 1967. (Dissertation Abstracts)

Knight, Kenneth E. "A Descriptive Model of the Intra-Firm Innovation Process." *Journal of Business*. 40:478-96. October 1967. (Theoretical or Non-Empirical)

Kohl, J. W. "Adoption Stages and Perceptions of Characteristics of Educational Innovations." *Dissertation Abstracts*. 27:3666-A. University of Oregon, 1966. (Dissertation Abstracts)

Kurland, Norman D. and Miller, Richard I. *Selected and Annotated Bibliography on the Processes of Change*. Lexington, Kentucky: University of Kentucky, 1966. (Bibliography)

Kurzler, William J. "A Study of Factors that Facilitate and Inhibit Instructional Change as Perceived by Principals." *Dissertation Abstracts*. 29:1716-A. University of Iowa, 1968. (Dissertation Abstracts)

LaPlant, James C. "School District Innovativeness and Expectations for the School Board Role." *Dissertation Abstracts*. 28:434-A. University of Wisconsin, 1966. (Dissertation Abstracts)

Lawrence, Clifford J. "Personality Characteristics of School Superintendents who Implement Innovation in the Public Schools." *Dissertation Abstracts*. 29:1397-A. Utah State University, 1968. (Dissertation Abstracts)

Leeper, Robert R. (editor). *Strategy for Curriculum Change*. Washington, D.C.: Association for Supervision and Curriculum Development, 1965. (Collection)

Lin, Nan; Leu, Donald J.; Rogers, Everett M.; Schwartz, Donald F. *The Diffusion of an Innovation in Three Michigan High Schools: Institution Building through Change*. East Lansing, Michigan: Institute for International Studies in Education and Department of Communication. December 1966. (Empirical)

Lin, Nan. "Innovative Methods for Studying Innovation in Education and an Illustrative Analysis of Structural Effects on Innovation Diffusion within Schools." Paper presented at the National Conference on the Diffusion of Educational Ideas. East Lansing, Michigan. March 26-28, 1968. (Empirical)

Lionberger, Herbert F. "The Diffusion Research Tradition in Rural Sociology and its Relation to Implemented Change in Public School Systems." in Meierhenry, Wesley C. (editor). *Media and Educational Innovation.* University of Nebraska Press, 1964. (Theoretical or Non-Empirical)

Lippitt, Ronald and Havelock, Ronald. "Needed Research on Research Utilization." Paper presented at the National Conference on the Diffusion of Educational Ideas. East Lansing, Michigan. March 26-28, 1968. (Theoretical or Non-Empirical)

Lippitt, Ronald and colleagues. "The Teacher as Innovator, Seeker, and Sharer of New Practices." in Miller, Richard I. (editor). *Perspectives on Educational Change.* New York: Appleton-Century-Crofts, 1967. (Theoretical or Non-Empirical)

Loy, John W., Jr. "Social Psychological Characteristics of Innovators." *American Sociological Review.* 34:73-82. February 1969. (Empirical)

Marcus, Alan S. and Bauer, Raymond A. "Yes, There are Generalized Opinion Leaders." *Public Opinion Quarterly.* 28: 628-32. 1964. (Empirical)

Mason, Robert. "Use of Information Sources by Influentials in the Adoption Process." *Public Opinion Quarterly.* 27: 455-66. Fall 1963. (Empirical)

Meierhenry, Wesley C. (editor). *Media and Educational Innovation: Authoritative Papers on Innovation by an Interdisciplinary Team.* University of Nebraska Press, 1964. (Collection)

Michigan State Department of Education, Vocational Education RCU. *A Study of the Diffusion Process of Vocational Education Innovations.* East Lansing, Michigan: Michigan State Department of Education, 1967. (Empirical)

Miles, Matthew B. "Educational Innovations, Some Generalizations." in Meierhenry, Wesley C. (editor). *Media and Educational Innovation.* University of Nebraska Press, 1964. (Theoretical or Non-Empirical)

Miles, Matthew B. (editor). *Innovation in Education.* New York: Bureau of Publications. Teacher's College, Columbia University, 1964. (Collection)

Miles, Matthew B. "Planned Change and Organizational Health: Figure and Ground." in Center for Advanced Study of Educational Administration (editor). *Change Processes in the*

Public Schools. Eugene, Oregon: University of Oregon, 1964. (Theoretical or Non-Empirical)

Miller, Richard I. "Implications for Practice from Research on Educational Change." Paper presented at the National Conference on the Diffusion of Educational Ideas. East Lansing, Michigan. March 26-28, 1968. (Theoretical or Non-Empirical)

Miller, Richard I. (editor). *A Multidisciplinary Focus on Educational Change*. Lexington, Kentucky: College of Education, University of Kentucky, 1965. (Collection)

Miller, Richard I. (editor). *Perspectives on Educational Change*. New York: Appleton-Century-Crofts, 1967. (Collection)

Mims, Crawford J. "Attitudes of Arkansas School Administrators Toward the Adoption or Rejection of Innovations in Education." *Dissertation Abstracts*. 29:1397-A. University of Arkansas, 1968. (Dissertation Abstracts)

Mort, Paul R. "Studies in Educational Innovation from the Institute of Administrative Research: An Overview." in Miles, Matthew B. (editor). *Innovation in Education*. New York: Teacher's College, Columbia University, 1964. (Empirical)

National Conference on the Diffusion of Educational Ideas: Major Papers. Sponsored by the Research Coordinating Unit of the Vocational Education Division of the Michigan Department of Education, in cooperation with the U.S. Office of Education, the Department of Communication, and the Continuing Education Service at Michigan State University, East Lansing, Michigan. March 26-28, 1968. (Collection)

National Education Association Journal. 56:25-33. "Special Feature on Innovation." May 1967. (Collection)

Overly, Donald E. "Comparative Analysis of North Central Accredited Indiana Secondary Schools in Relation to Educational Innovations." *Dissertation Abstracts*. 29: 1727-A. Indiana University, 1968. (Dissertation Abstracts)

Pafford, William N. "Relationships between Innovation and Some School Factors in Kentucky." *School and Society*. 96: 438-440. November 23, 1968. (Empirical)

Peach, Samuel Wesley. "Relationships between Certain Factors in the Role of the School Principal and the Adoption of Innovative Instructional Practices." *Dissertation Abstracts*. 29:104-A. University of Washington, 1967. (Dissertation Abstracts)

Pellegrin, Roland J. *An Analysis of Sources and Processes of Innovation in Education*. Eugene, Oregon: University of Oregon, 1967. (Theoretical or Non-Empirical)

Peterman, Lloyd E. "Relationship of In-Service Education to the Innovativeness of Classroom Teachers in Selected Public Secondary Schools in Michigan." *Dissertation Abstracts*. 27:2799-A. University of Michigan, 1966. (Dissertation Abstracts)

Peterson, Irving M. "Relationships between School Superintendents Personality Orientations, Perceived Situational Pressure and Innovativeness." *Dissertation Abstracts*. 29:2072-A. Rutgers, 1968. (Dissertation Abstracts)

Preising, Paul Phillip. "The Relationships of Staff Tenure and Administrative Succession to Structural Innovation." *Dissertation Abstracts*. 29:447-A. Stanford University, 1968. (Dissertation Abstracts)

Ramer, Burton. "The Relationships of Belief Systems and Personal Characteristics of Chief School Administrators and Attitudes toward Educational Innovation." *Dissertation Abstracts*. State University of New York at Buffalo, 1968. (Dissertation Abstracts)

Richland, Malcolm. "A Study to Refine an Operational Index of Innovation for School Administrators." *Dissertation Abstracts*. 29:1732-A. University of Southern California, 1968. (Dissertation Abstracts)

Rogers, Everett M. (editor). *Bibliography on the Diffusion of Innovations*. Michigan State University Department of Communications. East Lansing, Michigan. July 1967. (Bibliography)

Rogers, Everett M. "Communication of Innovations in a Complex Institution." *Educational Record*. 49:67-77. Winter 1968. (Theoretical or Non-Empirical)

Rogers, Everett M. *Diffusion of Innovations*. New York: Free Press, 1962. (Theoretical or Non-Empirical)

Rogers, Everett M. *Supplement to Bibliography on the Diffusion of Innovations*. Michigan State University Department of Communications. East Lansing, Michigan. September 1968. (Bibliography)

Rogers, Everett M. "What are Innovators Like?" *Theory into Practice*. 2: December 1963. (Empirical)

Rogers, Everett M. and Cartano, David G. "Methods of Measuring Opinion Leadership." *Public Opinion Quarterly*. 26:435-41. 1962. (Empirical)

Rogers, Everett M. and Jain, Nemi C. "Needed Research on Diffusion within Educational Organizations." Paper presented at the National Conference on the Diffusion of Educational Ideas. East Lansing, Michigan. March 26-28, 1968. (Theoretical or Non-Empirical)

Rogers, Everett M. and Stanfield, J. David. "Adoption and Diffusion of New Products: Emerging Generalizations and Hypotheses." Paper presented at American Marketing Association, 1966. (Empirical)

Rollins, Sidney P. and Charters, W. W., Jr. "The Diffusion of Information within Secondary School Staffs." *Journal of Social Psychology*. 65:167-78. 1965. (Empirical)

Rosner, Martin M. "Economic Determinants of Organizational Innovation." *Administrative Science Quarterly*. 12:614-25. March 1968. (Empirical)

Ross, Donald H. (editor). *Administration for Adaptability*. New York: Metropolitan School Study Council. Teachers College, Columbia University, 1958. (Theoretical or Non-Empirical)

Rubin, Louis J. "Installing an Innovation." in Goulet, Richard R. (editor). *Educational Change: The Reality and the Promise*. New York: Citation Press, 1968. (Theoretical or Non-Empirical)

Sapolsky, Harvey M. "Organizational Structure and Innovation." *Journal of Business*. 40:497-510. October 1967. (Empirical)

Sarason, Seymour B. "The School Culture and Processes of Change." The Brechbill Lecture, University of Maryland. January 10, 1966. (Theoretical or Non-Empirical)

Sarason, Seymour B. "Toward a Psychology of Change and Innovation." Psi Chi Lecture at American Psychological Association. New York. September 1966. (Theoretical or Non-Empirical)

Sargent, Harold Ross. "A Test of Motivational Appeals Judged Effective by Chief School Administrators to Induce Teacher Acceptance of Educational Innovation." *Dissertation Abstracts*. 26:6484. Pennsylvania State University, 1965. (Dissertation Abstracts)

Schulman, Hugh S. "The Initiation of Change by Principals in the Elementary Schools of Nassau and Suffolk Counties, New York." *Dissertation Abstracts*. 29:785-A. New York University, 1966. (Dissertation Abstracts)

Shepard, Herbert A. "Innovation-Resisting and Innovation-Producing Organizations." *Journal of Business*. 40:470-77. October 1967. (Theoretical or Non-Empirical)

Sieber, Sam D. "Organizational Resistance to Innovative Roles in Educational Organizations." *Research in Education*. (ERIC) 3:45. June 1968. (Theoretical or Non-Empirical)

Sieber, Sam D. with the collaboration of Lazarsfeld, Paul F. *The Organization of Educational Research in the United States*. New York: Bureau of Applied Social Research, Columbia University, 1966. (Empirical)

Smith, Alfred G. *Communication and Status: The Dynamics of a Research Center*. Eugene, Oregon: Center for the Advanced Study of Educational Administration. University of Oregon, 1966. (Empirical)

Spencer, Eugene. "Variables Affecting the Adoption Rates of Educational Innovations in Selected School Districts of Oakland County, Michigan." *Dissertation Abstracts*. 28: 2965-A. Wayne State University, 1967. (Dissertation Abstracts)

Spitzer, William K. *A Bibliography on the Process of Change*. Institute for Development of Educational Activities, Inc. Melbourne, Florida, 1968. (Bibliography)

Strategies for Educational Change Newsletter. Ohio State University School of Education. Published six times a year, October 1965-April 1968. (Collection)

Stuart, Michael and Dudley, Charles (editors). *Bibliography on Organization and Innovation*. Eugene, Oregon: Center for the Advanced Study of Educational Administration. University of Oregon, 1967. (Bibliography)

Theory into Practice. 2: entire issue. "Changing the School." December 1963. (Collection)

Theory into Practice. 5: entire issue. "Planning for Educational Change." February 1966. (Collection)

Troldahl, Verling C. "A Field Test of a Modified Two-Step Flow of Communication Model." *Public Opinion Quarterly*. 30: 609-23. Winter 1966-67. (Empirical)

Van Alfen, Curtis Nicholas. "A Study to Develop an Instrument Measuring the Perception of Educators and Teachers as it Relates to Innovative, Transitional or Traditional Educational Environments." *Dissertation Abstracts*. 28:1255-A. University of Utah, 1967. (Dissertation Abstracts)

Voos, Henry. *Organizational Communication: A Bibliography*. New Brunswick, New Jersey: Rutgers University Press, 1967. (Bibliography)

Watson, Goodwin (editor). *Change in School Systems*. Washington, D.C.: Cooperative Project for Educational Development, National Education Association, 1967. (Collection)

Watson, Goodwin (editor). *Concepts for Social Change*. Washington, D.C.: Cooperative Project for Educational Development. National Education Association, 1967. (Collection)

Weis, John Philip. "Awareness of Change: A Study of Factors Related to Knowledge of Educational Innovation." *Dissertation Abstracts*. 28:4725-A. Yale University, 1967. (Dissertation Abstracts)

Willower, Donald J. "Barriers to Change in Educational Organizations." *Theory into Practice*. 2: December 1963. (Theoretical or Non-Empirical)

Winick, Charles W. "Diffusion of an Innovation among Physicians in a Large City." *Sociometry*. 24:384-96. 1961. (Empirical)

Woods, Thomas E. *The Administration of Educational Innovation*. Eugene, Oregon: Bureau of Educational Research, School of Education. University of Oregon, 1967. (Theoretical or Non-Empirical)

Wygal, Benjamin R. "Personal Characteristics and Situational Perceptions of Junior College Instructors as Related to Innovativeness." *Dissertation Abstracts*. 27:3283-A. University of Texas, 1966. (Dissertation Abstracts)